Man cannot discover new oceans
unless he has the courage to lose sight of the shore.
- Andre Gide

From font-of-knowledge to facilitator: Exploring a model of professional change with South African early educators

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Preface

This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text. It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my thesis has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. It does not exceed the prescribed word limit for the relevant Degree Committee.

The following is an abstract of the thesis:

"From font-of-knowledge to facilitator: exploring a model of professional change with South African early educators"

authored by Hanne Jensen

Despite positive developments in greater access to the South African reception grade, recent evaluation studies reveal that early educators struggle to take a responsive role, including in child-managed play. This is a challenge, which resonates across cultures. The ambition of this study was to develop a diagnostic tool and model to capture early educators' change journeys as they grappled with adopting play-based practices. This tool should be feasible to use at scale, and yet provide insights on why practitioner journeys unfolded as they did. A model of change was chosen, which combines educational beliefs, reflective orientation and teaching efficacy to predict change scenarios. By mixing methods, the study sought to contextualise each construct for the South African culture, while also aiming for the model and methods to be adaptable for other cultural settings. Ninety-six early educators from an in-service training programme responded to an initial questionnaire, and from this group, eight educators were invited to join the study's main qualitative part. These educators received classroom visits early and later in the study to record practice videos, followed by one-hour interviews using recordings from that day. Between visits, participants responded to reflective tasks on their sense of efficacy for teaching the curriculum through play. Finally, two focus group interviews were conducted to contextualise findings. For seven practitioners, enough

data was obtained to map their change journeys: four fitted the change model's envisioned scenarios, while the remaining practitioner journeys did not fit either scenario neatly. Themes from the focus group interviews showed that participants were as much concerned with children's nurture and welfare, as they were with teaching and playful practice, and that underserved circumstances added substantial strain to their working lives. Findings highlighted the importance of precision and context when using the adopted model to map and support educational change on playful approaches: all participants were in favour of play as a learning context but differed in their interpretations and actual practices. This study appears to be the first to apply the change model in full. As such, it contributes to research on patterns of early educators' complex learning and change, including for the novel context of South African early education. Further, the study offers practical insights for future training programmes on play-based practices.

Acknowledgements

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Note: The front page is adapted from 'Mountain Cliff' by Frans Van Heerden, Bo-Karoo, South Africa.

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Chapter one | introducing the study

In this thesis, I explore two surprisingly common issues related to play-based practices in early education. First, when introduced to playful approaches, educators often face a challenging shift in their role from a 'font-of-knowledge' and authority in charge to a facilitator who supports children's self-directed efforts (Pyle, DeLuca, & Danniels, 2017; Weisberg, Hirsh-Pasek, & Golinkoff, 2013). Being a facilitator goes beyond providing play materials and observing play: Drawing on the original sense of the word, meaning a person who makes an action or process easier (Oxford Dictionary[1]), a facilitating educator joins children as a co-player and guide to support their engaged learning in play (see e.g., Pyle & Danniels, 2017; Gaviria-Loaiza, Han, Vu & Hustedt, 2017). While early educators can be supported to adopt this facilitating role through training (Riojas-Cortez, Alanís, & Flores, 2013; Vu, Han, & Buell, 2015), this shift does not always happen (Suk Lee, Baik, & Charlesworth, 2006).

Secondly, through my work, I've often met early educators who expressed themselves warmly in favour of child-led, playful approaches, and yet, this view was not reflected in their practice. Both of these issues – the challenging role shift and beliefs-practice disconnects – seem to revolve around the beliefs educators hold about children, teaching and their professional learning, as well as challenges inherent to adopting playful approaches in education settings. With this study, my ambition was to better understand patterns in practitioner change journeys, and to develop a diagnostic tool that would allow the LEGO Foundation and partners to identify practitioner groups with different starting points and support needs. Section one of this first chapter describes my initial motivation for undertaking the study, and how it took roots in South Africa. Section two situates the issues presented on play-based practices in the South African early education context, before outlining the thesis overall.

[1] https://www.lexico.com/en/definition/facilitator

1. Professional need meets research interest

My interest in this topic was first sparked when working as an educational advisor with the LEGO Foundation six years ago. I was in China, hosting a workshop with kindergarten teachers together with a local partner. We were showing ways to facilitate young children's learning through playful, hands-on activities with LEGO bricks, coloured paper, string, ping pong balls and other materials. The participants sat in groups around low tables meant for their young learners. I had just given an open-ended task: *Mia is five, and she is excited; her two cousins are coming to visit this weekend to play. The trouble is that they need a place to sleep. Mia's room is quite small - there is a table, one chair and a chest of drawers, and then Mia's own bed. Only one person could fit on the floor or in the bed. How could Mia make room for three people to sleep in her small room?* It was a joy to watch the teachers eagerly discussing, building and coming up with solutions. Several groups made bunk beds and decorated these meticulously. Others came up with king size beds, incorporating the table and drawer in their models. As they built, I moved from group to group, asking about their models, challenging their thinking, encouraging those who were stuck, and mediated when groups struggled to reach a shared solution. I was in fact modelling the techniques they would shortly practice: asking open-ended questions and using a supportive approach with learners.

Once finished building, I asked the groups to pair up and ask each other how, what, and why-questions about each other's' models and ideas. To my surprise, the kindergarten teachers used questions like 'why does this bed have no rail to keep children safe?' or asked, 'what is this, and this, and this bit?' in quick succession. Others simply pointed out what was wrong with another group's model. I intervened, and tried to model inquiring, open-ended questions once more, but to no avail. Only when I requested all to observe, and walked from group to group – first modelling questions carefully, then prompting a group with open-ended questions to ask of their peers, and finally eliciting similar questions – did the teachers start to pick up the idea. By the time we had worked our way through five of the six groups, they really grasped the technique. This experience, along with similar instances in the Ukraine and the Philippines, continued to puzzle me. It seemed that workshop participants were hearing and seeing something other than the playful practice I tried to convey.

1.1 The LEGO Foundation's mission and work

At the LEGO Foundation, I have since joined the research team, focusing on playful experiences and how they impact children's learning and development. My current role is to review research, synthesise findings in accessible formats, and conduct studies that allow the LEGO Foundation to make informed choices for advocacy and programme work with partners. Our work is underpinned by the Foundation's mission to build a future where learning through play empowers children of all ages to become creative and engaged, life-long learners.[2] As an organisation, we are present in South Africa, Denmark, Ukraine and Mexico, working with local authorities, like-minded institutions and partners to realise this goal. Along with country-specific programmes, we strive for scale by addressing global issues, including children's learning in early education. Historically, quality in early education has often been viewed in tangible terms, such as features of the environment, equipment, staff-child ratios and staff qualifications (Pianta, Downer, & Hamre, 2016). In recent decades, however, the interactions children have with educators and peers have surfaced as key to their learning opportunities, and more so than structural aspects alone (Cash, Ansari, Grimm, & Pianta, 2019; Hamre et al., 2013; Pianta et al., 2016).

Classroom studies suggest that while educators often are warm and caring in their relations with young children, they are less attentive to children's learning needs and interests; this is an issue across the world: from the United States (Ansari & Purtell, 2017) and China (Hu, Fan, Yang, & Neitzel, 2017) to Chile (Leyva et al., 2015), and Denmark (Slot, Bleses, Justice, Markussen-Brown, & Højen, 2018). More to the point of this thesis, early educators appear to struggle with taking an intentional and responsive approach, especially during child-managed play (Goble & Pianta, 2017; Pianta, Whittaker, Vitiello, Ansari, & Ruzek, 2018; Walsh, McGuinness, & Sproule, 2017). Improving children's learning opportunities requires reliable ways to identify practitioners' starting points, including their beliefs on play, learning and teaching, as well as salient context factors influencing their practices. It further requires an understanding of educational change: why some educators find it challenging to adopt a responsive role during play, while others do not, and how to best support them on their journey. These questions formed the basis for my doctoral study.

[2] https://www.legofoundation.com/en/what-we-do/

1.2 How the study took roots in South Africa

The research context of the study was a professional support programme for early educators designed by TREE, a training organisation based in South Africa (for an overview of the programme, see Appendix fourteen). Our partnership started in 2015, when the TREE team provided training as part of a randomised, controlled trial funded by the LEGO foundation. During this trial, TREE noted a recurring mismatch between practitioners' theoretical knowledge and their practices. In response, they developed a new support programme, which aimed to help practitioners translate theoretical knowledge on child development, learning and play into practice in their classrooms. Given how our interests coincided, we agreed that I joined as a collaborator in this pilot to research the change journeys of TREE's programme participants. The pilot programme was specifically aimed at practitioners working in the South African reception grade, which was only recently introduced in the country.

2. Play and early education in South Africa

The South African reception grade ('Grade R') was initiated in 2001 to promote school readiness among 5-6-year-old children still affected by inequities stemming from Apartheid and since then, provision has expanded massively: In 2011, 79% of 5-year-olds attended some form of early education (Richter & Samuels, 2018). The Grade R curriculum is part of the Foundation Phase (reception to grade 3) and includes literacy, numeracy and life skills, which should be taught in '…an integrated, play-based and child-centred manner…' (Richter et al., 2018, p. 15). Despite the positive developments in terms of access, evaluations have raised concerns about the teaching quality in Grade R classrooms (Van der Berg et al., 2013). Critically, since this grade level originated in a system with educators of young children having no formal qualifications, workforce development remains a tremendous challenge; further to the point of the present study, didactic forms of teaching continue to be the norm (Richter et al. 2018), even though play-based practices are mandated in the Grade R curriculum to support children's developmental and academic learning outcomes (Excell, 2016). Studies find that Grade R educators struggle with achieving a balance between direct instruction and child-managed play (Aronstam & Braund, 2015; Berry, Biersteker, Dawes, Lake, & Charmaine, 2013; Shaik & Ebrahim, 2015).

As such, researchers in the country propose that promoting Grade R educators' understanding of their own role in supporting children's development is central to improving practice quality (Van der Berg et al., 2013; Kotzé, 2015; Spaull & Kotze, 2015). International studies have demonstrated benefits of equipping early educators to adopt more active, responsive roles in practices with young children (McCoy & Wolf, 2018; Egert, Fukkink, & Eckhardt, 2018). However, as noted early in this chapter, trainings on early childhood development, practice principles and techniques do not necessarily translate to shifts in classroom practices: Professionals' attitudes, informed by their beliefs about effective teaching, children's learning, play and development, influence the extent to which new knowledge is taken in and acted upon (Fives & Buehl, 2012; Kagan, 1992; Pajares, 1992; Reeve & Cheon, 2016; Williford et al., 2017). Equally, professional learning does not happen in a vacuum: time constraints, heavy workloads, pressure from educational policies (Beltman, Mansfield, & Price, 2011) present constant dilemmas in practice. In light of these challenges, the purpose of the present study was to explore a model and diagnostic tool on educational change, focusing on the beliefs practitioners held about children's learning through play, roles they undertook with children, and factors influencing whether they adopted a more facilitative and guiding role during play.

Following this first opening chapter, the second chapter in this thesis reviews the research literature, which informed the study's design and methods. These are then detailed in chapter three on methodology. Chapters four to six present findings in response to the study's research questions. The seventh and final chapter discusses these results and implications for future research and practice.

Chapter two | a review of the literature

In order to make causal inferences between responsive adult roles in play and young children's gains, most studies on guided play have taken place under laboratory conditions (Toub, Rajan, Golinkoff, & Hirsh-Pasek, 2016). While these studies have yielded promising results, guided play researchers contend that this circumstance calls for further efforts to translate findings into real-life classroom settings (Weisberg et al., 2016). Hence, in section one of this chapter, I first situate the concept of guided play within research fields focused on play and responsive teaching in classrooms, placing emphasis on practices with young children. Drawing on research literatures on responsive and autonomy-supportive teaching (Reeve, 2012; Reeve, Cheon, & Jang, 2019; Pianta, Hamre, & Allen, 2012), and considering African cultural perspectives on children's play and relations with adults, I then propose criteria to define guided play for classroom research. The remaining sections in this literature review are devoted to research on educational beliefs and professional change. This literature has theorised that challenging and shifting practitioners' beliefs about teaching and learning can lead to matching shifts in practice, and also the opposite process, where educational change starts with shifts in practice; for example, that educators try a new teaching approach in their classroom, and, following a positive experience, they reconstruct their beliefs (Buehl & Beck, 2015). In either case, the question remains what mechanisms serve to promote or hinder change. Hence, in section two of this chapter, I delve further into the nature of educational beliefs, their functions and the potential for reflection to catalyse beliefs change. In section three, I explore teaching efficacy as a possible mechanism explaining educational change. After these framing sections, I review two theoretical models that use efficacy processes and practitioner reflection to explain professional change specifically for educators in section four: the *Efficacy-Based Change Model* (EBCM; Ohlhausen et al., 1992) and the *Cognitive-Affective Conceptual Change Model* (CAMCC; Gregoire, 2003). The change process and mechanisms of each model are considered in light of recent empirical studies. In section five, three scenarios of educational change are proposed based on the literature reviewed, along with key factors present in the South African education context. The review concludes with a brief summary of insights and research gaps, leading on research questions and methodology, which are presented in the following chapter three.

1. Learning through play as practice

Taking an evolutionary perspective, learning through play is natural and integral to healthy human development (Yogman et al., 2018; Pellegrini, Dupuis, & Smith, 2007). For disciplines investigating play and young children's education, the sense that play and learning are related and yet diverging has resulted in less than helpful dichotomies. In this section, I expand upon links between play and learning from the perspective of early education research and practice. Many points made here can also be found in a white paper and research synthesis entitled *Play facilitation: the science behind the art of engaging young children* (Jensen et al., 2019b).

1.1 Play and learning: definition issues and false dichotomies

Over the years, researchers have produced several checklists to capture the essence of playful behaviour across species (Miller, 2017). These five criteria offer a well-known example: (1) In the context where play appears, its function is less evident; (2) play is spontaneous, pleasurable, or freely chosen, and (3) compared to behaviours with more evident functions, play differs in form (e.g., is exaggerated) or in timing (e.g., occurs ahead of its time); (4) repetitions and patterns are common (without being rigid) and (5) play takes place when the player is relatively free from environmental threats and social stressors (Graham & Burghardt, 2010). These criteria point to intriguing similarities between play observed in humans, ravens and rats. On the other hand, when such criteria are transferred to education settings, where goals form an inherent part of practice, it is not really helpful to oppose 'playful behaviour' and activities that have 'evident functions'.

Another definition issue comes down to entrenched dichotomies of 'play' and 'learning' found in educational research, as well as in policy and practice debates. Some researchers have argued that direct instruction is necessary for learning, while minimal guidance and discovery-based approaches (such as play) are ineffective (Kirschner, Sweller, & Clark, 2006). Others underscore the disruptive effect of adults' presence and guidance on children's playful explorations (Bonawitz et al., 2011; Ghafouri & Wien, 2005). The debates tend to wrestle with either-or questions of whether direct instruction is better than play, and if play should be child- or adult-directed (Goble & Pianta, 2017; Pyle et al., 2017).But not all researchers in this field insist on dichotomies. Russian psychologist Lev Vygotsky (1967) was among the first to theorise about a promising play-learning interface. He noted how play can be a

space for children to master ‘higher mental functions’ valued by society: during the first years of life, Vygotsky stated, children grow out of behaving according to immediate impulses and become capable of intentional behaviour, and these changes happen as an interplay between a growing individual and interactions with other people (Bodrova & Leong, 2015; Vygotsky, 1967).

In later years, studies have found support for this claim, showing that young children demonstrate intentional, self-directed behaviour in social play settings (Moreno, Shwayder, & Friedman, 2016; Timmons, Pelletier, & Corter, 2016; Whitebread et al., 2009). Studies exploring shared play between young children and adults in real-life settings further find that early educators have a pivotal role in this process. For instance, they can adopt playful stances with toddlers to assist them during morning leave-taking (Pursi, Lipponen, & Sajaniemi, 2018) or foster young children’s interest in numeracy and literacy through creating opportunities to observe adults deeply engaged in everyday problem-solving (Colliver & Arguel, 2018). Others find that when playful activities are combined with a responsive adult, children’s learning of specific academic skills improves (Fisher, Hirsh-Pasek, Newcombe, & Golinkoff, 2013; Goble & Pianta, 2017; Hassinger-Das et al., 2016; Ramani, Zippert, Schweitzer, & Pan, 2014).

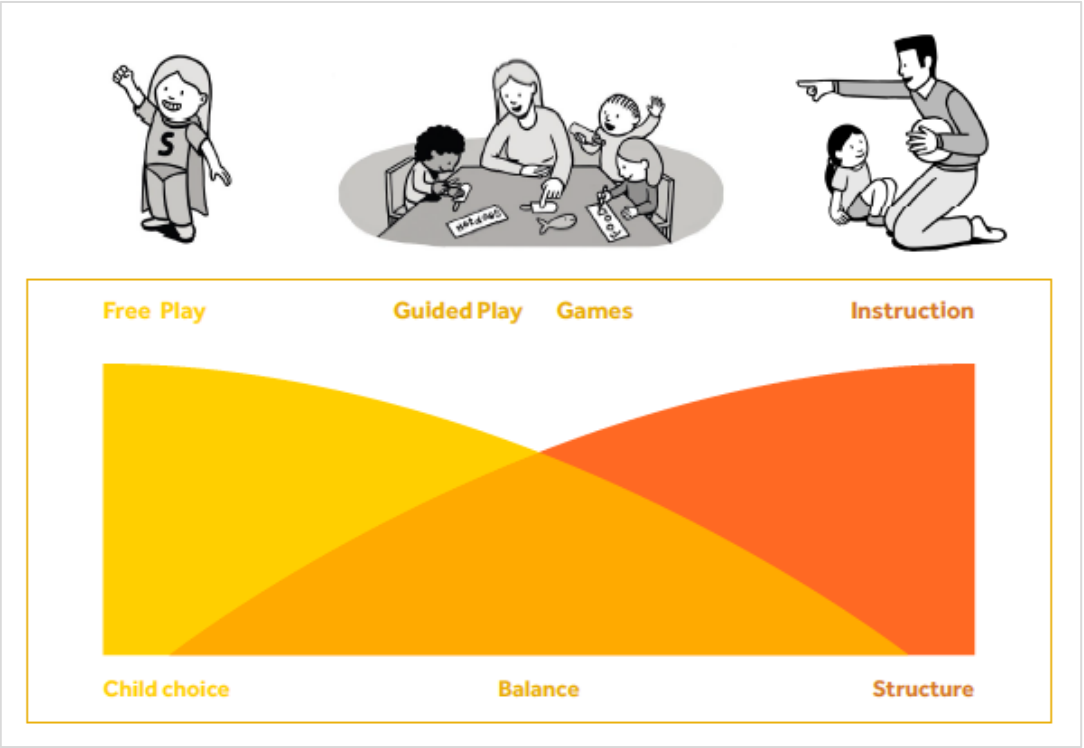
1.1.1 Overcoming debates of play versus learning

I would argue that much of the concern expressed in debates on instruction versus free play stems from un-nuanced views of children’s learning, play, the nature of choice and what it means to afford structure in education settings. For instance, reducing instruction to ‘information transmission’ where the educator is responsible for ‘depositing’ new knowledge into children’s minds (i.e., verbal instruction on its own), is not in fact effective, because children follow passively; however, studies find that more interactive forms of teaching are – for instance, with educators explaining new content using worked examples (Lee & Anderson, 2013), feedback, scaffolding, and elicited explanations (Alfieri, Brooks, Aldrich, & Tenenbaum, 2011). The point is that when instruction is enacted as a one-way approach of imparting information to passive learners, this is unlikely to promote their understanding and grasp of new concepts. Equally, expecting young children to master new concepts and skills through unassisted discovery is problematic. In the next section, I explore how to define a balanced practice of supporting children’s learning through play.

1.2 Defining learning through play as practice

Researchers investigating joint forms of play, where educators support children's learning and development in play contexts, propose that playful practices can be understood as a spectrum rather than one specific practice. This spectrum ranges from providing for children's free play with minimal adult direction to guided forms of play in the middle and onto more direct instruction, as illustrated in Figure 1 (Bergen, 2009; Pyle & Danniels, 2017; Toub et al., 2016; Walsh et al., 2017; Weisberg et al., 2013; Zosh et al., 2018).

Figure 1: Illustration of spectrum of practices



Children's free play with a high degree of self-direction and choice is indicated on the left in Figure 1. Moving towards the right, practices gradually become more structured through guidance afforded by responsive adults and the environment (e.g., rules and materials). On this spectrum, instruction is interactive, meaning children are actively engaged through dialogue and feedback with concrete examples etc. (Alfieri et al., 2011; Lee & Anderson, 2013), though they may not have choices in what to do and how. In the middle are practices, which balance children's choice and the degree of structure provided through guidance and rules: games and guided play.

1.3 The educator role in play: engaging and responsive

Research finds that introducing an activity to children and calling it 'play' is not enough to make it playful and engaging for children: they read subtle cues from adults, and in order to perceive a learning activity as play, children need an element of choice and sharing of control (McInnes, Howard, Crowley, & Miles, 2013). This is important, since children who perceive a learning activity as playful become more engaged. In one experimental study, Sawyer (2017) compared the same task, a nearly impossible fishing activity, framed as either role-play or as a task for which children could earn a sticker. In the playful condition, children persisted for longer and tried to master the challenge compared to peers in the reward condition. In another study, four- and five-year-olds built more complex structures when playing together in pairs than when using the same materials in an adult-directed task (Ramani, 2012). The need for adults to be tactful and tune in on children's states of being in play resonates with classroom research on teacher-child interactions, and, in this regard, two literatures have underpinned the present study: *responsive teaching* (Pianta, Hamre, & Allen, 2012) and *autonomy-supportive teaching* (Reeve, 2012).

1.3.1 Applying self-determination theory to playful practices

Research on responsive and autonomy-supportive styles of teaching is rooted in Self-Determination Theory, which explains how fostering a sense of belonging, autonomy, and competence in children leads to high-quality engagement (Pianta et al., 2012; Reeve, 2012). Recognising that culture shapes the kinds of relations young children have with adults (Reid, Kagan, & Scott-Little, 2019), comparative research begins to suggest that engagement is at the heart of human learning and growth across diverse cultures (Chen et al., 2015). As such, these two strands of research are pertinent to better understanding play-based practices. Studies on responsive teaching have focused on effective practices in early education to foster positive outcomes for young children (Hamre, 2014). Links have also been made between autonomy-supportive teaching and child outcomes such as well-being, engagement and academic achievement, though mainly for older learners (Upadyaya & Salmela-Aro, 2013). What this second body of work has done, above and beyond linking practices and outcomes, is to further connect educators' styles of motivating learners with their beliefs (Reeve, Jang, & Jang, 2018). According to these two literatures, educators can foster children's engagement by being responsive, having warm and positive relations with children, and by making efforts to meet their needs and

requests (Hamre, 2014; Wolf et al., 2018). Being responsive means that educators build on what children know and care about, support peer interaction, higher-order thinking and language skills, just as they connect lessons to children's lives in meaningful ways; they pre-empt conflicts among peers, articulate clear expectations and use routines to assist children in spending most of their time engaged.

As noted above, research on autonomy-supportive styles has mainly featured older students (Hagger & Chatzisarantis, 2016), although a few studies have involved early educators (Côté-Lecaldare, Joussemet, & Dufour, 2016; Koivula, Gregoriadis, Rautamies, & Grammatikopoulos, 2019). This literature posits two fundamental styles of motivating children to engage with a task or activity (Reeve, Cheon, & Jang, 2019). When educators use an facilitative (or autonomy-supportive) style, they motivate by fostering learners' inner sense of competence, autonomy, and relatedness; in practice, they adopt students' perspectives, welcome their thoughts, actions and feelings, and encourage their capacity for directing their own actions; they build on students' interests and preferences when organising learning activities; they offer meaningful choices in what to do and how to approach a task, provide rationales for activities and requests they make, and acknowledge students' feelings and perspectives; their language is non-controlling, and they give students time to learn at their own pace (Reeve, 2009; Stefanou, Perencevich, DiCintio, & Turner, 2004; Stroet, Opdenakker, & Minnaert, 2015). When guiding children's learning in play, adults adopt a similar interaction style: they scaffold, rather than direct children's attempts, and strike a balance between achieving their own intended learning goal and children's agency in a playful activity (Toub et al., 2016). Hence, the locus of control in guided play is fluid and never entirely relinquished by either children or the educator (Sproule, Walsh, & McGuinnes, 2019; King & Howard, 2016). Beyond helping to unpack this balanced educator role, research on responsive and autonomy-supportive teaching can speak to cases where educators become over- or under-involved in their interactions with children.

1.3.2 Directive and withdrawn educator roles

When educators are highly directive, children have fewer opportunities to express their needs, interests and take initiative; activities and conversations are instead directed by the adult, and tend to focus on rote learning and correct answers; peer interactions are not actively supported, and behaviour management is more reactive

(Hamre, 2014; Stipek & Byler, 2004). A related pattern is seen from the literature on autonomy-supportive teaching. Some educators attempt to motivate learners by using a controlling style, and apply social pressures, intrude on their thoughts, feelings and actions, and seek compliance over engagement (van der Kaap-Deeder, Vansteenkiste, Soenens, & Mabbe, 2017). The opposite case, with educators being under-involvement, is less evident from either literature. In the case of responsive teaching, quality interactions are gauged on a continuum from low to high quality (Pianta et al., 2016), while the autonomy-supportive style is on one end of a scale and the controlling style rests on the other (Reeve, 2009). However, studies increasingly suggest that a minimum level of responsiveness (i.e., a more involved adult role) is needed to yield gains for young children (Hatfield, Burchinal, Pianta, & Sideris, 2016). Stipek and Byler (2004) propose that when educators are more withdrawn, children also have fewer opportunities to express and elaborate on their thoughts; peer interactions are neither restricted, nor supported; children deal with peer conflicts, unless these escalate, and while participation may be high, little systematic effort is made to foster learning.

Recently, researchers have noted that early educators often switch between a directive and withdrawn role in their practice with young children, rather than a balance, facilitative approach (Goble & Pianta, 2017; Jilink, Fukkink, & Huijbregts, 2018). The style of interacting, which educators choose to adopt with children, seems to be informed by their beliefs. For instance, Reeve and colleagues (2014) found that when educators believed that a responsive, facilitating style of teaching was more effective, feasible and valued in their working context, they reported preferring this style. Other studies have noted that preferring an autonomy-supportive style is associated with educators viewing child engagement as key to learning, and with striving for own personal learning and growth (Katz & Shahar, 2015; Reeve et al., 2018). Roth and Weinstock (2013) investigated styles of teaching, as reported by students, compared with educators' personal epistemology, and found that educators holding more absolutist beliefs were less likely to promote student autonomy. Relations between educator beliefs and practices are elaborated further in part two of this chapter. In conclusion to this first part on children's learning through play, I next review conceptions of play and playful practices in African cultures.

1.4 Guided play in South African early education

In policies framing early education in South Africa, play and play-based approaches are deemed part of quality practices (National Plan of Action for Children in South Africa 2012-2017; National Curriculum Statement for Grades R-3, 2012). For instance, among the goals set in the national plan of action in place during the present study, one objective under 'Play and Leisure' reads: 'To encourage and resource play activities for children and adolescents through the national school curriculum' (p. 57). This objective is reflected in the National Curriculum Statement for Grades R-3 (NCS) where practices in the reception grade, for example on language, are termed 'play-based learning' referring to 'a range of child-centred activities, such as free-play in the fantasy corner or block construction site, and teacher-directed activities such as a story 'ring' or other 'rings' (NCS Home Language Learning, 2012, p. 20). Even so, researchers and non-governmental organisations in the country critique the emphasis on children's access to play materials and activities without offering more specific guidance on play-based practices and educator roles in play (Isaacs et al., 2019; A Chance to Play Southern Africa, 2017).

This issue plays out in several ways. For example, South African early educators are found to prefer structured, predictable play and view child-led play in more recreational terms (Aronstam & Braund, 2015). With their in-depth qualitative study, Shaik and Ebrahim (2015) carefully described the professional lenses, which Grade R educators used to spot learning opportunities in play contexts; they found that concerns for keeping order and discipline, and for finding evidence of learning that corresponded with the curriculum, created barriers to children's capacities to act, choose, and to develop (Shaik & Ebrahim, 2015). As such, guided forms of play, where adults engage to promote children's understanding and mastery of skills, are less evident in this context. Further, introducing this practice into South African early education may challenge conceptualisations of children and play, as found in both curriculum documents and the educators themselves. A related critique from South African researchers centres on the need for re-orienting curricula and practice more intentionally towards indigenous notions of play, childhood and development (Rudolph, 2017; Marfo, 2011; Serpell, 2018; Serpell & Marfo, 2014).

To give an example, indigenous African world-views place concepts of belonging, interdependence, and relatedness at the centre (Rudolph, 2017). This is reflected in children's own play culture in rural settings where they often spend time playing together in stable friendship groups, just as siblings have a prominent role to foster young children's play and learning of indigenous games, more so than parents (Marfo & Biersteker, 2010; Nyota & Mapara, 2008). However, these notions, Rudolph (2017) argues, are not acknowledged in education polices, which instead favour Western cultural concepts: 'The focus on the 'development' of the individual child that must be observed and recorded eclipses the image of collective friendship, for example, in the ubungani groups, where 'knowledge' is a way of being, rather than a 'thing' to be acquired.' (Rudolph, 2017, p. 92). She and other researchers point to government and sector efforts to reduce inequality and poverty as part of the reason, in that these efforts have focused on adopting education outcomes and programmes originating within research and policy contexts in North America and Europe, without first engaging with local notions of education, its purpose and place in society (Rudolph, 2017; Brink, 2016; Marfo & Serpell, 2014; Marfo & Biersteker, 2011). Concluding on this section, the points presented highlight potential dilemmas of play, practice, educational demands and culture, which informed the definition of guided play adopted in the study.

1.5 Defining guided play for classroom research

Based on insights from the literatures reviewed on guided play, responsive and autonomy-supportive teaching, as well as the presence of diverging notions of play in education found in South Africa, I chose to adopt a broad definition of play-based practices in order to contextualise guided play within this study. The following criteria were used: having signalled 'play time' or framed a play activity, the early educator is a) present and interacting with children during the play activity (see section 1.3 in this chapter), b) children have some degree of choice, and c) the educator extends or enriches their play through a responsive role. These criteria reflected guided play's fluid locus of control: that children direct their own explorations in play, while the educator guides their efforts through a balanced approach, which is responsive, rather than directive in style (see sections 1.3, and particularly 1.3.1 to 1.3.2, in this chapter). In addition to classroom practices, the study sought to address South African early educators' professional 'lenses' – the beliefs and perceptions held about children's learning, play, and effective teaching approaches.

In education, practitioners' often rely on beliefs in their moment-to-moment interactions with learners: *'…particularly those that underlie their intuition, automaticity, and habit, to meet the demands of practice.'* (Fives & Gregoire Gill, 2014, p. 1). Researchers find associations between self-reported beliefs and practices (McMullen et al., 2006), but these are not clear-cut: Studies suggest that practitioners can favour child-initiated learning beliefs and yet display directive behaviours when interacting with children (Wen, Elicker, & McMullen, 2011). Some educators report feeling constrained from realising a holistic child focus by factors in their working life (Enyedy, Goldberg, & Welsh, 2006; Jones, Burts, Buchanan, & Jambunathan, 2000; Parker & Neuharth-Pritchett, 2006). In other cases, they seem unaware of potential gaps between their stated beliefs and enacted practice (Bryan, 2003; Cheng, 2001). These studies pointed to a necessity for investigating the South African educators' starting points and working context, including beliefs and practices they favoured, and supports or barriers they met in their daily work.

2. Educational beliefs and professional change

In this next part of the literature review, I present insights from research on educational beliefs, professional learning and change, which informed the study's design and methods. I first explore the nature of educational beliefs, their role in practitioners' decision-making and professional learning, and how reflection on teaching conceptions can spark change. In the following section three, I proceed with reviewing literature on social learning theory and Bandura's concept of self-efficacy as a central concept to the alternative route of educational change: practice shifting first, and beliefs second.

2.1 The nature of educational beliefs

Educational beliefs refer to a broad field. Research has found teaching professionals to hold beliefs about subject-matter (e.g. science, literacy, or social studies) as well as teaching and learning, their own school and teaching contexts, own teacher identity, specific teaching approaches and practices, and of course their students or students in general (Fives & Buehl, 2012; Kagan, 1992; Pajares, 1992). The beliefs of interest in this study were those held by South African early educators on teaching and learning: how young children in their classrooms learn, beliefs about their own professional learning and role as teachers, and their perceptions of children's play as a learning context. Conceptualising beliefs for investigation presented some issues.

One issue was disentangling beliefs from knowledge as a concept (Fives & Buehl, 2012; Kagan, 1992; Pajares, 1992). Nespor (1987) outlines four characteristics that are more prominent for beliefs than knowledge. First, beliefs derive from personal life history (*episodic structure*) and, secondly, they form assumptions central to our understanding of the world and ourselves (*existential presumption*). For example, if truth is absolute and can be transferred between people, then teaching is about imparting facts (Hofer & Pintrich, 1997). Beginning teachers tend to base this beliefs-to-teaching translation on their own experiences of being taught and specific teacher role models from their own school experiences (Eick & Reed, 2002). In this sense, beliefs can come to represent alternative realities and ideals (the third characteristic, *alternativity*, Nespor, 1987), which help define goals and tasks in ill-defined situations. A final and central characteristic is that beliefs rely greatly on emotions and subjective evaluation (Nespor, 1987, pp. 318-19). What one feels about an approach is distinct from what one knows (*affective and evaluative aspects*), and these preferences can influence efforts to apply a given approach in practice. Another conceptualisation issue was the conflicting qualities, which beliefs apparently encompass: Fives and Buehl (2012, pp. 473-8) list studies describing beliefs as implicit and explicit, stable and changeable, general and context-dependent.

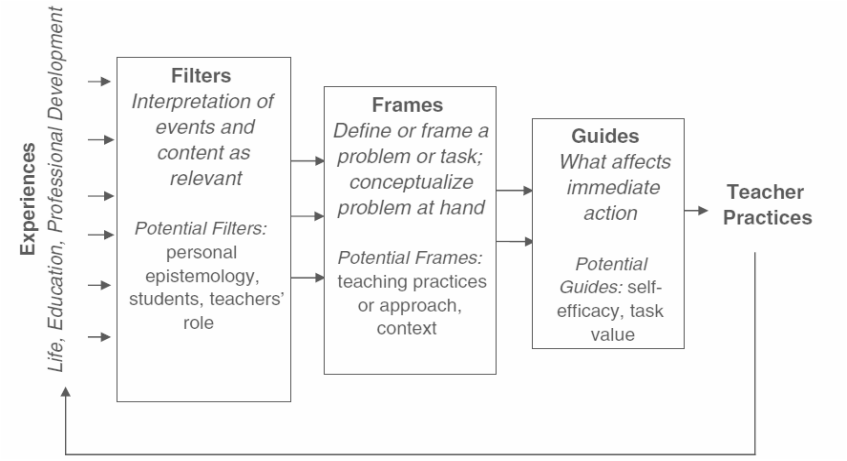
An integrated 'beliefs system' has been proposed to consolidate these conflicting findings on the complex nature of educational beliefs (Fives & Buehl, 2012; Pajares, 1992; Rokeach, 1968). This system represents the countless beliefs a person holds about the physical and social world. Arising from life experiences, a person's beliefs are organised in a psychological rather than logical order (Rokeach, 1968, p. 2). For example, in her year-long study with an elementary school science teacher, Bryan (2003) identified two types of beliefs on science and science teaching: *foundational beliefs* included deeply entrenched, stable beliefs about the value of science and teaching, the nature of science and instruction goals, and control in the classroom. *Dualistic beliefs* encompassed hesitant notions of how children learn science, the role of students and the teacher, and these beliefs rested in two 'nests.' Nest A held teacher-centred, didactic and transmission-based beliefs about teaching and learning, while nest B reflected beliefs of the teacher as a manager or facilitator, students as interactive, and learning as hands-on (Bryan, 2003). In interviews, the teacher expressed a vision for her science classroom consistent with nest B (facilitation), while in practice, she enacted nest A (transmission).

In their review, Fives and Buehl (2012) make a similar point about educational beliefs as 'activated by context demands' and varying in their specificity (p. 475). They propose that beliefs exist on a 'continuum of stability': from long-held, deeply embedded beliefs that are resilient to change to newer, more isolated and context-dependent beliefs that are open to change (Fives & Buehl, 2012, p. 474). Bryan's study (2003) exemplifies how personal systems of beliefs can hold conflicting notions at the same time. The next section addresses beliefs functions and how these might act as change mechanisms.

2.2 Functions served by educational beliefs

From early on, research on educational beliefs centred on investigating their potential as mechanisms explaining differences in practices and behaviour (Oliver, 1953). Studies have shown that the beliefs practitioners hold influence the manner in which they interpret pedagogical knowledge (Hermans, van Braak, & Van Keer, 2008; Hofer & Bendixen, 2012; Pajares, 1992), frame situations and teaching tasks (Rimm-Kaufman, Storm, Sawyer, Pianta, & LaParo, 2006), and enact decisions in practice (e.g., Hancock & Gallard, 2004). Despite such findings, few insights from this literature explain the specific processes at work in the beliefs-practice relationship (Fives & Buehl, 2012; Fives & Gregoire Gill, 2015; Hofer, 2017; Hofer & Bendixen, 2012). Fives and Buehl (2012) use often-cited beliefs functions to suggest a model where beliefs filter new information (i.e., from classroom or training experiences), frame practitioners' interpretation and guide their immediate actions (Figure 2):

Figure 2: Model of how beliefs influence practice (Fives & Buehl, 2012)



Other studies concur that educational beliefs can act as attentional filters and influence whether practitioners benefit from participating in trainings (Suk Lee et al., 2006). Training formats that encourage reflection on own practice offer one avenue to address this aspect of beliefs (Riojas-Cortez et al., 2013; Rusznyak & Walton, 2014). Another avenue has its roots in Bandura's seminal work on behaviour change within a socio-cognitive framework (Bandura, 1977; Bandura & Adams, 1977; Wood & Bandura, 1989). This line of inquiry highlights the important role of observational learning together with raising participants' sense of personal efficacy as drivers of change in their teaching behaviour. Hence, in the next sections, specific educational beliefs that may serve as filters and frames in the present study are addressed. These include beliefs about play and learning, knowing and knowledge, educator and learner roles, and beliefs about effective teaching. Beliefs about teaching efficacy are likewise addressed, given their potential guiding function.

2.3 Beliefs about play and learning

The first set of beliefs to be considered are those held by early educators on the role of play in children's learning. The Developmentally Appropriate Practices Guidelines developed by the US-based National Association for the Education of Young Children (NAEYC, Copple & Bredekamp, 2009) have led to numerous studies on these beliefs and their congruence with practice (Cobanoglu & Capa-Aydin, 2015; McMullen, 1999; McMullen et al., 2006; Suk Lee et al., 2006). Practices termed 'developmentally appropriate' and guided play share features, although the former tends to focus on matching children's developmental stage (Bredekamp, 2014), while guided play is inspired by Vygotskian notions of social learning with knowledgeable others (Weisberg et al., 2016). The NAEYC guidelines describe the characteristics of teachers using developmentally appropriate practices (DAP) and contrasting practices. In the first case, playtime and children's self-directed choice are emphasised, together with emergent literacy and language development, suggesting an approach that integrates play and learning in activities. In the case of contrasting practices, teacher-directed activities and pre-planned curricula take precedence, with play regarded as a break from learning (McMullen et al., 2006). In her study with two Hong Kong kindergarten teachers, Cheng (2001) also found a pattern with play as integrated or separate from academic learning.

The first teacher described play as a context for children to explore the world but was also concerned with the 'truth' of children's findings – when a girl labelled a flower smell as 'oranges' she was corrected (Cheng, 2001, p. 860). This teacher perceived 'play' as separate from academic learning activities (i.e., writing or mathematics), since such activities were prescribed by the kindergarten curriculum and did not spring from children's interest. The second kindergarten teacher shared a notion of play as providing children with 'real experience', but also interpreted 'learning through play' as participatory. Her struggle to combine playful, self-directed activities with academic content centred on school culture: '…she found it difficult to change her teaching of academic knowledge as she was practising in the way that her colleagues did' (Cheng, 2001, p. 863). Based on her analysis, Cheng concluded that the two kindergarten teachers' play perceptions were 'piecemeal' and 'superficial' with academic learning treated as separate from play activities, despite their intention to let children explore (Cheng, 2001, p. 865).

In a quantitative study to develop a questionnaire on play and learning perceptions, Fisher and colleagues (2008) found three perception profiles among U.S. mothers of young children (*All Play*, *Uncertain* and *Traditional*) and compared their responses with those of experts in the field. Similar to the teachers in Cheng's study, responding mothers associated academic learning with more structured activities, but also defined play as encompassing structured activities (e.g., using flash cards and having a book read to them). By contrast, an expert group with college professors, early educators and child psychologists conceptualised play as mainly unstructured (Fisher, Hirsh-Pasek, Golinkoff, & Gryfe, 2008, p. 314). These studies indicate that beliefs hinge on whether play is seen as separate from or integrated in learning activities. Profiling teachers using dichotomies may not capture important nuances suggested by the discrepancies between educators' beliefs and practice (Fives & Gregoire Gill, 2015; Wen et al., 2011). But creating profiles from practitioner responses to 'concrete activities children might do' (Fisher et al., 2008) or concrete statements about play as practice (Walsh & Fallon, 2019) could overcome the issue of 'false profiling' where educators' beliefs, as identified through questionnaires, seem unrelated with their practice.

2.4 Beliefs about knowing, learning and teaching

In addition to beliefs about play, this study focused on practitioners' beliefs about young children's learning, their own role as educators in the classroom and their professional learning. Reviews of this literature propose that beliefs about the nature and sources of knowledge underpin learning and teaching beliefs (Brownlee & Berthelsen, 2006; Brownlee, Boulton-Lewis, & Purdie, 2002; Hofer & Pintrich, 1997; Hofer & Bendixen, 2012). The next section explores this topic.

2.4.1 Epistemic beliefs

Epistemic (or epistemological) beliefs refer to the source, certainty and simplicity of knowledge, and the justification for knowing (Hofer & Pintrich, 1997; Hofer & Bendixen, 2012). Findings from empirical studies suggest that practitioners' epistemic beliefs influence (i.e., filter) how educational experiences are interpreted (Fives & Gregoire Gill, 2015; Hofer, 2001). These beliefs commonly range from knowledge construed as absolute, stable and conveyed by experts to knowledge seen as personally constructed, based on inquiry and relative to different contexts (Hofer & Pintrich, 1997). In the context of teaching and professional learning, reviewers find mixed evidence on relations between educators' epistemic positions and practices (Fives & Gregoire Gill, 2015; Hofer & Pintrich, 1997; Hofer & Bendixen, 2012).

One possible and promising mechanism, which studies have identified, is practitioner reflection (Alexander, 2017; Hofer, 2017). For instance, King and Kitchener's extensive research led to the reflective judgement model (RJM), which establishes links between changes in epistemic assumptions and degree of reflective thinking (King & Kitchener, 2004): At the *pre-reflective* level, knowledge is considered certain and conclusions rely mainly on authority and personal opinion. In the *quasi-reflective* stage, a major shift in thinking has taken place. Uncertainty is now part of the knowing process; knowledge is seen as personally constructed and not discrete facts that can be transferred from one person to another. At this stage, the process of gathering evidence to reach conclusions is not firmly in place yet. This happens in the *reflective* stage, which is characterised by consistent and practiced use of reasoning to support personal judgements. Knowledge claims are seen as context-dependent and knowledge construction an ongoing process (King & Kitchener, 2004, pp. 8-9). In this model, epistemic assumptions serve to interpret ill-defined problems and predict a person's use of problem-solving strategies (King & Kitchener, 2004; Nespor, 1987).

When educators assume truth to be absolute, the supposition is that they are likely to opt for dogmatic, rule-based solutions when resolving dilemmas in practice; those who think at either the quasi-reflective or reflective stages, are more likely to reason towards a solution that is adapted to the situation (King & Kitchener, 2004). The RJM aligns with findings that epistemic beliefs and reflective ability are functions of education (Schommer-Aikins, 2004; Schommer, 1998; Schommer, Calvert, Gariglietti, & Bajaj, 1997), just as these beliefs appear to inform practice (Roth & Weinstock, 2013). King and Kitchener found that patterns of stability and growth for epistemic assumptions and reflection depend on contextual support to reflect (2004, p. 11). Consequently, helping educators to reflect on their beliefs about knowledge and knowing could constitute a change mechanism, following Piaget's concept of disequilibrium or self-doubt (Hofer & Bendixen, 2012). On a final note, conceptions of knowledge are bound to differ across South African subcultures and the North American and European contexts in which most epistemic beliefs research has taken place (Fives & Gregoire Gill, 2015), and so the present study strove to remain open to knowledge and learning assumptions unique to the local context. There has been some research exploring notions of 'being a teacher' espoused by South African student teachers. Findings from these studies and related research are considered in the following section on teaching beliefs.

2.4.2 Beliefs about the teaching role

South African research on beliefs covers studies with student teachers' motivations for taking up the profession (Wolhuter, Van der Walt, Potgieter, Meyer, & Mamiala, 2012) and experiences during teacher education (Kiggundu & Nayimuli, 2009). However, little is known of the conceptions, which beginning in-service educators hold and how resilient these are in the present study's context. In their case study with South African student teachers, Rusznyak and Walton (2014) investigated this question using metaphors to track changes in initial conceptions of teaching to those stated after the students' first year of university courses. Participants were asked to describe another profession that represented important characteristics of a good educator, according to their own understanding (i.e. nurse, pastor, coach), and give a written rationale. Interestingly, two extremes emerged among eight metaphor clusters in their responses: one with learners seen as highly individualised (*Teachers nurture*; *Teachers create*) and one depicting educators who inform, perform and direct, with learners as a homogenous group i.e. an audience or congregation (Rusznyak &

Walton, 2014, p. 347). The two authors argue that neither of these extremes are conducive to striking a balance with educators being responsive to and yet not overwhelmed by diverse learner needs. They also identify metaphors, which did strike this balance with educators who mentor, organise, and repair. Rusznyak and Walton's (2014) findings represent examples of two of Nespor's belief characteristics (1987). First, the classroom practices, which South African teacher students themselves have experienced, are described as rote learning with few meaningful conversations or peer-to-peer interactions (Rusznyak & Walton, 2014; van der Berg & Hofmeyr, 2018). This is an issue since conceptions about teaching are shaped by personal experiences of being taught (*episodic structure*, Nespor, 1987; Pajares, 1992). Second, students in their study were asked to reflect on factors or experiences that prompted conception change. Some attributed the shift to their uncovering of teaching aspects, which they had not noticed as learners (e.g., lesson planning), while others highlighted opportunities to observe alternative practice (*alternativity*; Nespor, 1987). These findings suggest that reflection on own schooling and observation of new practice can prompt changes in teaching conceptions.

2.5 Summary on educational beliefs and change

Based on the reviewed theoretical and empirical work on educational beliefs, this literature suggests that epistemic beliefs are core to a person beliefs system, and function as 'existential presumptions' (Nespor, 1987) or 'central values' (Hofer & Pintrich, 1997). For immediate practice (as opposed to lesson planning, for example) findings indicate that epistemic beliefs underpin learning beliefs, even if an educator's experience and contextual factors also influence teaching choices (Bryan, 2003; Enyedy et al., 2006). Beliefs about educator roles likely stem from schooling experiences, and there is some reason to suppose that these beliefs are changeable (Rusznyak & Walton, 2014). While some encompassing models of beliefs change were found to exist (Bendixen & Rule, 2004; Gregoire, 2003), these had not been widely studied. Fives and Buehl (2012) proposes a model explaining the relationship between beliefs and practices, which suggests a self-perpetuating cycle: beliefs filter new information, frame the task and guide actions in practice with experiences providing fresh information to be filtered. In other words, no model of beliefs *change* was presented in their review (Fives & Buehl, 2012). The later handbook on teacher beliefs research (Fives & Gregoire Gill, 2015) only contains a brief chapter on studies of educational beliefs development. Here, the focus is on gradual changes in beliefs

over the course of a teaching career, rather than as the result of targeted professional development. Following these insights, I turn to research inspired by Bandura's (1997) seminal work on how self-efficacy judgements shape attempts with a novel skill. After briefly introducing social learning theory, this work on self-efficacy and skills progression is reviewed next.

3. Practitioner efficacy and professional change

In social learning theory, actions are not determined solely by resources available in the environment, nor internal dispositions, yet people have to navigate and make use of both when planning courses of action (Bandura, 1997, p. 6). People tend to avoid situations deemed beyond their abilities and readily undertake challenges they judge themselves capable of tackling – as such, people exert some measure of control or agency (Wood & Bandura, 1989). This theoretical position distinguishes between learning how to use a teaching strategy (i.e., *acquisition*), and applying that same strategy well and consistently in practice despite challenging and changing circumstances (i.e., *performance*; Wood & Bandura, 1989, p. 364). In a training situation, learning a new skill through observation is a three-step process, leading to performance in practice and a fourth motivation step. The first three steps resonate with the model of beliefs functioning as filters, frames and guides of action:

- *Attention* – attention determines what people selectively observe as well as the information they extract from the profusion of ongoing modelling activities at the training (filtering function).

- *Representation* – remembering is an active process of transforming and restructuring observed events into principles of practice and symbolic conceptions of teaching (framing function).

- *Behaviour* – symbolic conceptions are translated into courses of action. Performance is held against what the guiding conceptions suggest actions should be like, allowing people to adjust their attempts (guiding function).

According to these steps, participants' beliefs influence their attention as follows: the *focus* of training participants attention is informed by their prior notions of appropriate practice, as is their *ability* to notice. If a practitioner holds a strong conception of a directive teacher role, then she or he may not see subtle differences modelled by the

trainer, and consequently, these subtleties are not remembered after the training. As Wood and Bandura (1989) highlight with the third step of acting in practice, participants' conceptions of the new teaching practice will further guide their attempts at performing this approach in their classroom. In other words, Bandura and Wood's steps of adopting new behaviour (1989) align with Fives and Buehl's (2012) self-perpetuating cycle of beliefs influencing practice. Sustained performance in practice is influenced through a fourth step, motivation, which draws on both internal and external incentives (Wood & Bandura, 1989). Practitioners are more likely to adopt a new teaching strategy if doing so achieves a desired goal (e.g., teaching colours and shapes becomes easier) and earns them recognition (valued outcome), rather than punishing effects from superiors and parents. They are also motivated by the success of people they identify with and discouraged by the same people's failures (social comparison). Personal standards are another key incentive. These standards represent what people find self-satisfying or disapprove of and standards they evaluate their attempts against (Bandura, 1997; Wood & Bandura, 1989). For early education practitioners, beliefs about their teaching role can act as filters of both their attention and personal standards. In a training study with kindergarten teachers learning to use scaffolding, only those who held initial beliefs about teaching congruent with this practice would later use it in their classrooms (Suk Lee et al., 2006). A similar pattern occurred for a more recent study (Reeve et al., 2018), were researchers introduced an autonomy-supportive style of teaching to forty-two Korean educators who taught in grades one to six. Participants, who believed that fostering student engagement was an effective way of motivating their efforts, and who valued personal learning and growth, also saw the greatest gains from the semester-long intervention (Reeve et al., 2018). Along with educational beliefs, a key influencer of practitioners' choice to adopt or avoid a new approach is their sense of efficacy. As such, the construct and sources of educator self-efficacy are introduced next.

3.1 Sources of self-efficacy and practice change

According to social learning theory, self-efficacy beliefs are a proxy for the combined influences of context-activated beliefs and motivation to use new skills in practice (Bandura, 1997). Importantly, perceived efficacy is a judgement of capability, not to be confused with self-esteem (judgement of self-worth) or locus of control, which is concerned with beliefs about outcome contingencies (Bandura, 2006, p. 308). A practitioner may believe that self-directed activities promote children's learning

(outcome expectancy or learning belief), making such activities relevant in his or her working context (valued outcome), yet still have a low sense of self-efficacy due to constraints in time or situation (low locus). What practitioners believe themselves capable of realising is associated with distinct aspects of their profession and practice, such as planning activities, gaining support from colleagues and parents, and managing student behaviour (Bandura, 2006).

Bandura (1997) lists four main sources that inform personal efficacy; here, these sources are exemplified with teaching situations. *Mastery experiences* are first-hand experiences with performing a teaching task such as gaining young children's attention to provide them with new instructions. *Vicarious experiences* come from observing others perform or model a task. *Verbal persuasion* includes being persuaded that a new approach has educational value, receiving feedback, or perhaps listening to a colleague's appraisal of the approach. *Emotional arousal* is physiological responses (e.g., increased heart rate and perspiration) that might be judged as excitement, nervousness, or even hampering anxiety. Experiencing *personal mastery* is particularly powerful for enhancing efficacy expectations, since enacting a task allows a person to translate behavioural conceptions into actions (Bandura, 1997). Results from a study with practicing educators did indeed show that to raise participants' efficacy, and self-reported use of a new instructional strategy, in-practice mastery experiences and coaching with personal feedback were necessary (Tschannen-Moran & McMaster, 2009). There is some evidence to suggest that culture plays a role in how sense of self-efficacy is judged, but even so, the construct retains its importance as a predictor of performance and motivation (Klassen, 2004).

3.2 Concluding on educational beliefs, self-efficacy and change

Findings reviewed on educational beliefs indicate a possible change mechanism of challenging beliefs about teaching and learning through reflection (Brownlee et al., 2002; Hofer, 2017; King & Kitchener, 2004). This work primarily builds on Piaget's concept of disequilibrium or self-doubt (Hofer & Bendixen, 2012). Researchers in the field concede that studies on epistemic beliefs change have largely overlooked affective aspects, the role of contextual factors as constraints or supports and motivation (Fives & Gregoire Gill, 2015; Hofer & Pintrich, 1997). These aspects are in focus for research on self-efficacy (Bandura, 1997; Fives & Buehl, 2012; Tschannen-Moran & McMaster, 2009), which suggest a second change mechanism: beliefs can

shift following educators' using a new skill in practice with some success and positive feedback. Both literatures highlight complex relations between educator beliefs and practice, and note a possible self-perpetuating cycle. In this cycle, beliefs serve as attentional filters that help people to navigate evolving and demanding situations: beliefs shape what is noticed, and how situations and tasks are interpreted; in turn, this informs people's judgement of their capacity to accomplish that task. This cycle underscores the challenge of changing beliefs and practices but it also offers two entry points. First, trainers can surface current beliefs expressed by participants on teaching, learning and play, and then instil a sense of disequilibrium or self-doubt. Secondly, trainers can support participants to practice a new approach with feedback and encouragement, ensuring that they feel comfortable and capable. Assuming both entry points to be necessary, I searched for models of change that integrated efficacy processes and support for reflection. Two were found, namely, the *Efficacy-Based Change Model* (EBCM; Ohlhausen et al., 1992) and the *Cognitive-Affective Conceptual Change Model (*CAMCC; Gregoire, 2003). Both models of educational change are reviewed in section four below.

4. Current models of educational change

The researchers behind the EBCM sought to develop a model for viewing change in the context of educational innovations – in their case, focused on language learning (Ohlhausen et al., 1992). One research team later compared the EBCM with another invention (the Triadic Change Model; Dunn, Airola, & Garrison, 2013), but none reported applying the model with other innovations. The CAMCC (Gregoire, 2003) is a theorised model addressing conceptual change in subject-matter beliefs of mathematics teachers (i.e., from viewing mathematics in terms of right and wrong answers to a dynamic and creative field of human invention). When searching, I found nearly 500 research articles citing Gregoire's theoretical article (2003), but no empirical studies had applied the entire model within the context of professional learning and educational innovation. A handful of studies had explored parts of the model with pre- or in-service educators (*systematic processing and epistemic beliefs*, Gill, Ashton, & Algina, 2004; *prior beliefs and self-efficacy*, Brady et al., 2009; *sources of self-efficacy*, Tschannen-Moran & McMaster, 2009).

4.1 Mechanisms explaining sustained change

The change process proposed for the EBCM centres on participants' efficacy development, which takes place between stages of adopting an innovation (Ohlhausen et al., 1992). This process is influenced by causes, which participants attribute to the successes or shortcomings of past performances (attributional theory) and their perception of own efficacy to use a new approach in practice. Attributional theory (Weiner, 1979) contends that when people ascribe prior success to own ability or effort (internal causes), they are motivated to begin with and persist in a similar, new task. Those who interpret success as caused by luck or low difficulty are more likely consider events out of their control and so desist. In his research, Bandura argues that '…causal attributions can influence achievement strivings, but the effect is mediated almost entirely through changes in perceived self-efficacy' (1997, p. 123). Identifying differences among practitioners and their motivation to implement a new approach is clearly useful, however, the EBCM only includes indications of why these differences exist (i.e., early and later self-efficacy, causal attributions, and influencing factors); the model does not delineate a route towards sustained behaviour and beliefs change. In her review, Gregoire (2003) finds that this oversight is common for models of teacher change. Her alternative, the *Cognitive-Affective Conceptual Change Model* (CAMCC), consequently places emphasis on the routes leading to beliefs change.

4.2 The Cognitive-Affective Conceptual Change Model

In her article, Gregoire (2003) critiques earlier models building on Piaget's (1977) concept of equilibration (*dissonance theory;* Cooper & Fazio, 1984), assimilation and accommodation (*conceptual change model;* Posner, Strike, Hewson, & Gertzog, 1982). Piaget-inspired change models fundamentally assume that people strive for a state of cognitive balance (equilibrium) and so will either assimilate new insights in existing mental schemas, or, when faced with discrepancies, they will adapt their schemas to fit new insights. Neither dissonance theory nor the conceptual change model suggest specific change mechanisms apart from 'cognitive dissonance' and both disregard affective and motivational factors, as Gregoire points out (2003, p. 158). The CAMCC seeks to overcome these issues by integrating insights from research informed by dual-process theories (for reviews, see Chen, Duckworth, & Chaiken, 1999; Evans, 2008). Dual-process theories propose two routes that people use to process new information: a *systematic route* of effortful reasoning and a more

peripheral route of learned decision-rules or heuristics, that spring from previous experience, affect and less effortful means of decision-making (Gregoire, 2003). The CAMCC borrows three assumptions from this literature, and specifically on the Heuristic-Systematic Model (HSM; Chen et al., 1999). First, both systematic and heuristic processing routes seek to establish the truth about a persuasive message. Secondly, the first route requires more effort (and hence motivation) and cognitive ability than the second (i.e., reflective ability). Thirdly, people strive to balance the effort spent on analysing and how confident they feel about judging the new information. Early research found that systematic processing allows for attitude changes, which are more predictive of behaviour and more persistent over time, than changes resulting from heuristic processing (Petty, Cacioppo, Sedikideas, & Strathman, 1988). Later, Gregoire Gill and colleagues (2004) explored the systematic-heuristic aspect of the CAMCC, along with tapping teacher students' prior epistemic beliefs, but their study did not yield clear mediating factors. Reviewing papers citing Gregoire (2003), Gregoire Gill has apparently not pursued the CAMCC after this early attempt. Research on epistemic beliefs and reflection does argues for the salience of this aspect as a change mechanism (see section 2.4 in this chapter), although ascertaining practitioners' reflective ability in the context of educational change seems to require careful thought.

4.2.1 The CAMCC change process

Reviewing the journey of the CAMCC, this starts when practitioners are introduced to a reform message. In the example given (Gregoire, 2003, p. 164-6), well-researched reform standards on maths instruction challenge the professional identity of more traditional teachers. They first face the question: *Am I implicated in the reform?* Some will judge themselves as already enacting the new practices (benign-positive appraisal) and consequently lack motivation to process the messages systematically (right-hand route). Instead, they move along a route where only superficial beliefs change is possible. Teachers, who do feel implicated by the reform, enter a potentially stressful situation and face a second appraisal: *Is the reform a threat or a challenge?* Here, self-efficacy comes into play as they judge their own capabilities in context. Those who feel capable and resourced to apply the reform in practice are likely to try. Less efficacious teachers will aim to avoid the reform, moving along the heuristic route and towards superficial beliefs change (Gregoire, 2003, p. 164-168).

4.2.2 Change mechanisms in the CAMCC

According to the CAMCC (Gregoire, 2003), whether a practitioner tries to adopt a new approach first hinges on if they feel implicated, and their sense of efficacy ('do I have the abilities and resources needed to make a successful effort?'). Beliefs change is best achieved if practitioners reflect more deeply on the innovation (i.e., systematic processing) with support to practice its principles in their classroom (i.e., mastery experiences with feedback and guidance). As such, prompting reflection is the first change mechanism, similar to King and Kitchener's findings (2004), and the second is to increase efficacy through scaffolded practice (Gregoire, 2003, p. 172).

4.3 A review of the CAMCC efficacy process

In Gregoire's model (2003, p. 168), motivation (i.e., efficacy beliefs) and ability (i.e., time, knowledge, and resources) are depicted separately. The author suggests that beliefs about own capacity to implement a reform are not enough – an educator needs both motivation and capacity (i.e., ability) to reach the systematic processing route. Gregoire (2003, p. 170) illustrates this sequence with a fictional teacher, Blair. As a newly graduated teacher, Blair feels overwhelmed even without the addition of the teaching standards advocated for by the new reform and judges her sense of efficacy to be low (motivation / efficacy – weak). Further, she holds a preference for teaching reading over math (ability – insufficient). Consequently, Blair sees the reform initiative as a threat and adopts an avoidance intention. This notion of efficacy as somehow separate from considerations of knowledge, time and resources available for implementing a reform in own practice is not in line with Bandura's (1997) definition. As noted earlier, self-efficacy is a judgement of ability to carry out an action in a specific context, and not a case of either preference or self-esteem. When practitioners judge their efficacy for managing students, the assumption is that they take personal factors (i.e., task-specific ability and knowledge) as well as contextual constraints and supports (i.e., relations with students, time, support from colleagues and superiors) into account. In unfamiliar situations, however, Bandura (1997) does point to an additional factor, which merits a two-step sequence.

4.3.1 Self-efficacy judgements in new situations

In the context of new undertakings, Bandura argues that people have less of a basis on which to judge task demands and whether their skill set meets these (1997, p. 71). When faced with a complex and unfamiliar situation, they rely heavily on past

performance (‘I have mastered or not mastered similar tasks before’) in judging their efficacy and setting personal goals (see Figure 3 below). In Figure 3, the first box on the left (past performance) represents experiences, which a practitioner draws on when making his or her initial judgement of own efficacy. If we consider, as an example, that some practitioners may have tried grouping young children on a previous occasion and had affirming or discouraging experiences as a result.

Figure 3: Causal pathways in the efficacy process*

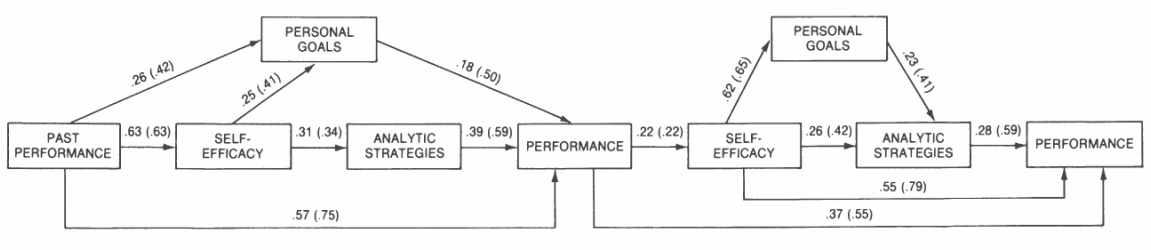
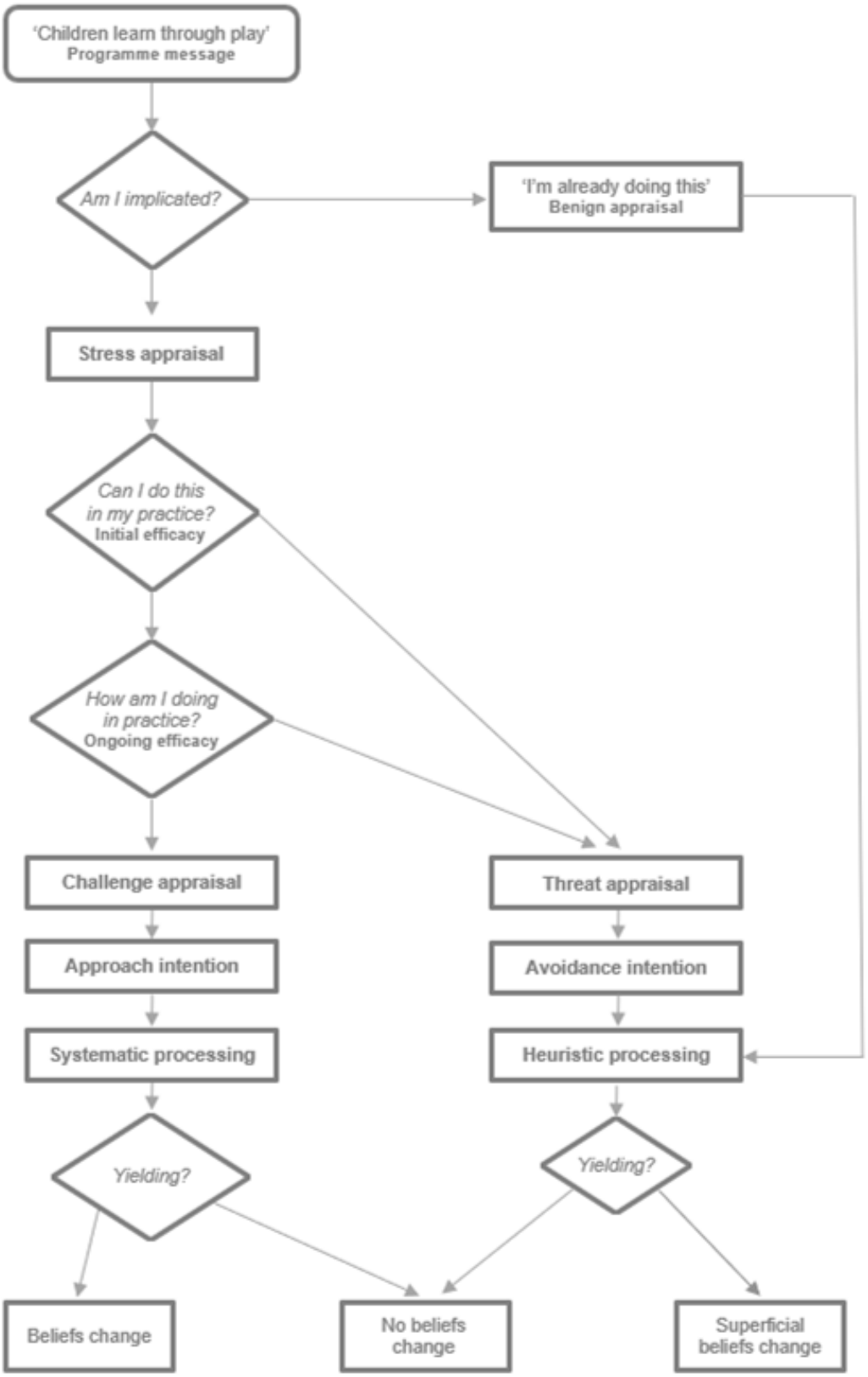


*Figure from Wood & Bandura, 1989, p. 379

Next, they are faced with a new undertaking, such as using concrete manipulatives with children working in groups, and their past performance informs their initial judgement of own efficacy (second box in the bottom row). Their initial self-efficacy influences goal setting (personal goals; low efficacy leads to lower goals – higher efficacy leads to higher goals) and use of analytic strategies (effective or ineffective use of available strategies). Together, these steps in the initial efficacy process shape subsequent judgements of efficacy for the specific task and we see a performance spiral unfolding. In social learning theory, this spiralling process is not viewed in deterministic terms (Bandura, 1997): A practitioner’s sense of personal efficacy relies heavily on mastery experiences, but also on modelling or observational learning (*vicarious experiences*), feedback and encouragement (*verbal persuasion*) and their feelings of anxiety or excitement (*emotional arousal*). Hence, training and support are central to change, in that these can respond to practitioners’ needs. Comparing the efficacy process from Bandura’s research (1997; Wood & Bandura, 1989) and Gregoire’s (2003) sequence with motivation first and ability second, a more accurate change model would use initial efficacy and ongoing efficacy, with efficacy sources influencing the second step. This re-design of the CAMCC is shown in Figure 4. In the next section, this revised model of change is applied to the context of guided play trainings.

Figure 4: Revised CAMCC with initial and ongoing efficacy



5. The CAMCC applied to guided play training

From the literature review, three constructs emerged as central to mapping educational change. The first centred practitioners' *interactions and teaching approaches* adopted in practice. The second construct was their initial and later *educational beliefs*; these included perceptions of the role of play in children's learning, and teaching conceptions, where assumptions about sources of knowledge and knowing could prove influential. The third construct referred to practitioners' sense of *personal efficacy* for enacting guided play in their practice. The CAMCC integrates the last two constructs but remains vague on the beliefs-practice relationship. This question is addressed in the next sections.

As seen in Figure 4, the CAMCC begins when a reform message is presented, and in the present study, the overall message advocated for by TREE's programme was 'children learn through play' (see Appendix fourteen). From this starting point, three scenarios of educational change are delineated below, followed by reviews of research to expand upon factors influencing sustained change and practitioners' reflective ability as an important mediating factor.

5.1 Scenarios of beliefs and practice change

Participants in the study had completed training to become certified early educators. From this qualification, they were already familiar with the learning-through-play message, if not the actual practice. Given this assumption, three scenarios of beliefs change were envisioned using the CAMCC: *Unconcerned* (or benign-positive appraisal), *Avoidant* (or threat appraisal) and *Adopting* (or challenge appraisal). These scenarios are elaborated on below and shown in Figures 5-7. Paths are indicated in parentheses (e.g., 'Implicates self? No').

Scenario A: Unconcerned

- **At the training**: The trainer conveys the programme message 'Children learn through play' The practitioner considers '*Am I implicated?'* and decides *'No, I'm already using play in my practice.'* While the trainer explains theory and practice, models activities, the facilitating role and so on, this unconcerned practitioner processes all information at a surface level.
- **In practice**: The practitioner feels confident that little needs to change and continues more or less as before.

Scenario B: Avoidant

- **At the training:** The trainer conveys the programme message 'Children learn through play.' The practitioner considers: *Am I implicated?* He or she decides: Yes, I'm not really using a playful, child-led approach. While the trainer explains and models, this practitioner grows convinced that playful, child-led activities are not possible in own context (low initial efficacy). S/he considers the approach as daunting and processes the information at a surface level.
- **In practice:** The practitioner avoids using a play-based approach.

Scenario C: Adopting

- **At the training:** The trainer conveys the programme message 'Children learn through play.' The practitioner considers: *Am I implicated?* He or she decides: *Yes, I'm not really using guided play in practice.* While the trainer explains and models, the practitioner finds that playful, child-led activities are worth a try and has confidence in own abilities (high initial efficacy). S/he seeks to understand principles and implications in detail (systematic processing).
- **In practice:** The practitioner tries the new approach and gains confidence through practice and feedback from the mentor and peers, and from the children themselves.

From reviewing the three scenarios, it becomes clear that beliefs change happens in one scenario only: *Adopting*. In the remaining two scenarios, the practitioner either does not note dissonances between own practice and the teaching approach conveyed (*Unconcerned*), or does note the difference but feels overwhelmed by perceived demands of task and desists (*Avoidant*). Mechanisms include educational beliefs, acting as initial filters and frames, and self-efficacy beliefs, which inform decisions to approach or avoid the innovation. This step is followed by the route of either surface or deeper reflection, which determines if beliefs are reconstructed and changes adopted in practice.

Figure 5: Diagram of Scenario A *Unconcerned*

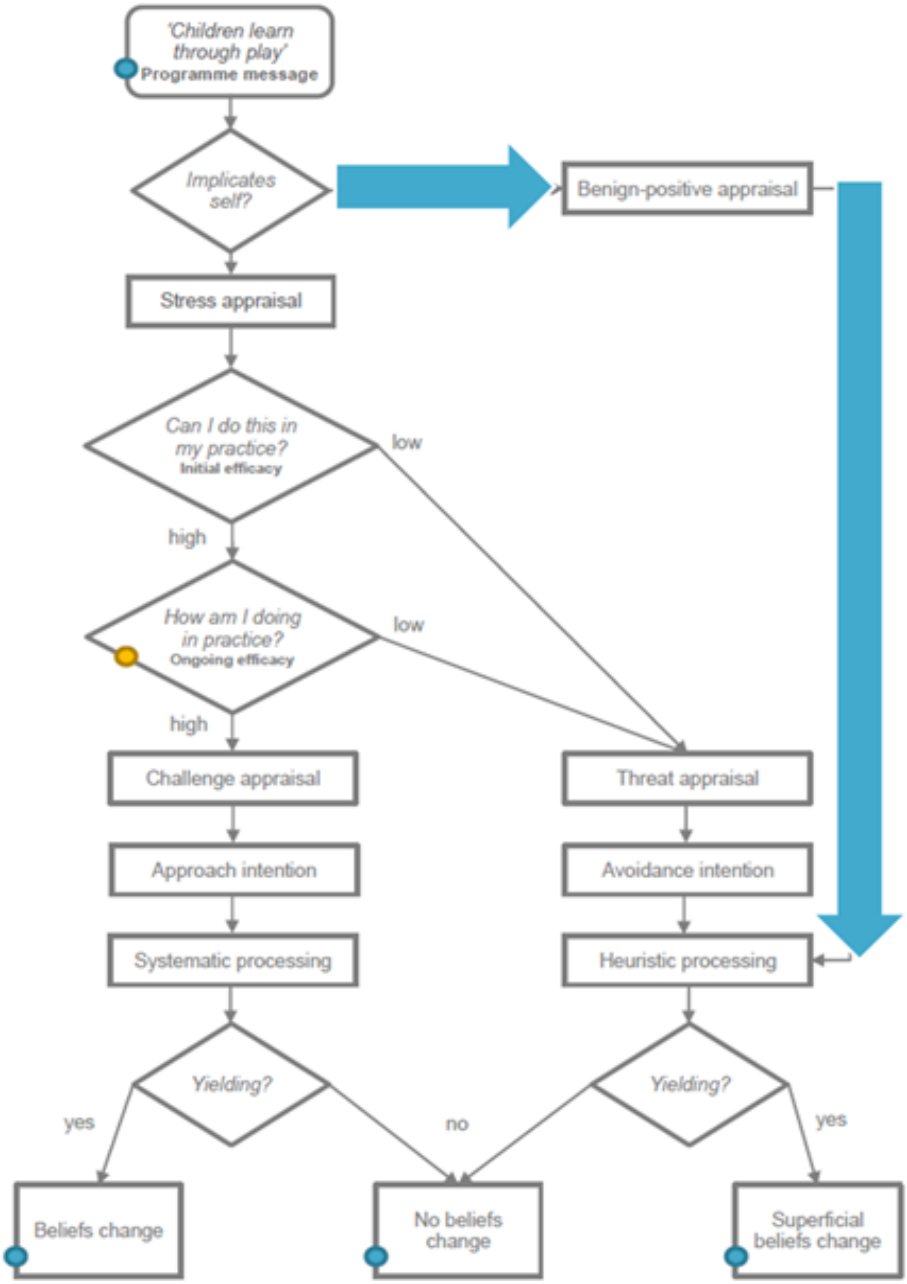


Figure 6: Diagram of Scenario B *Avoidant*

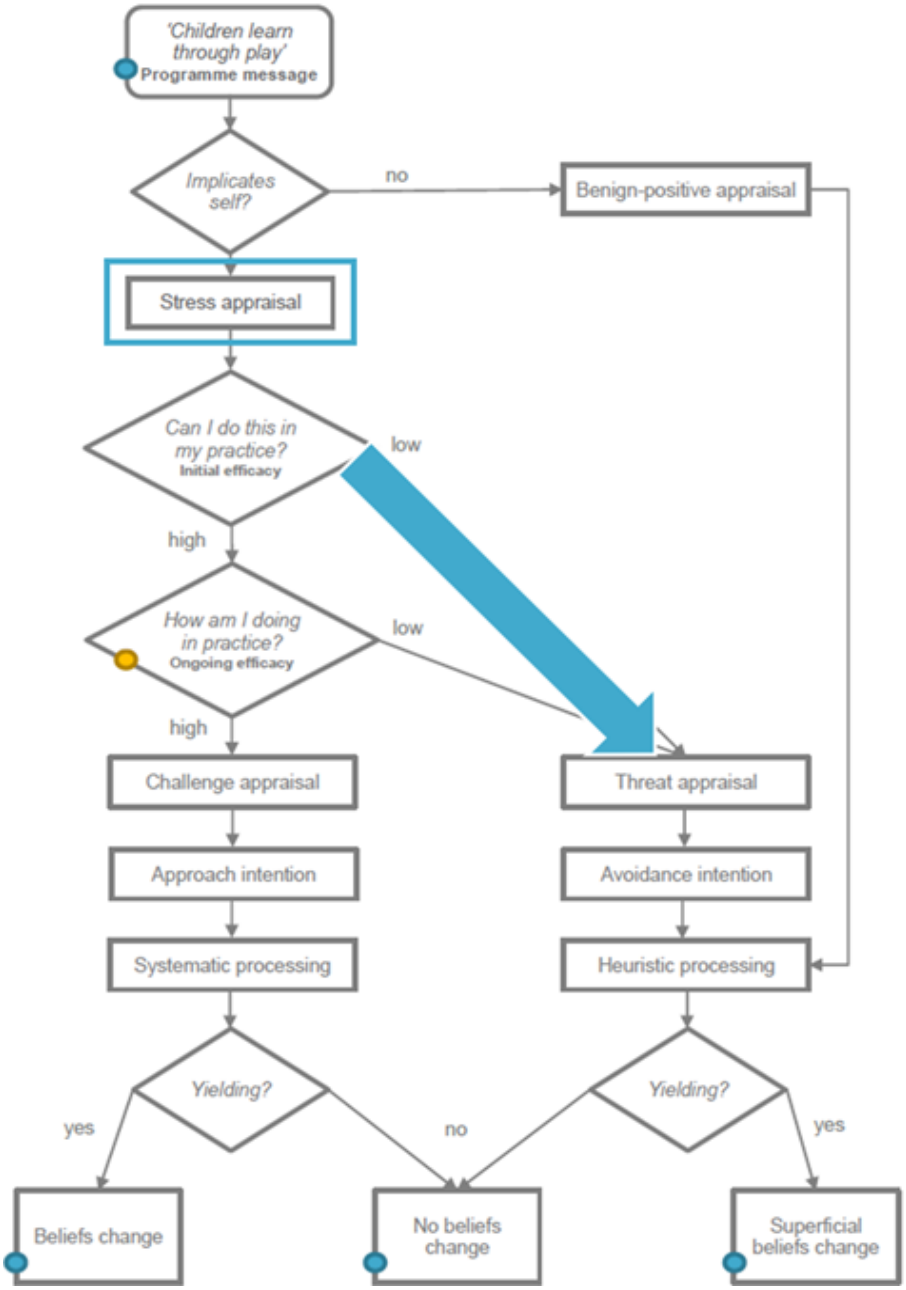
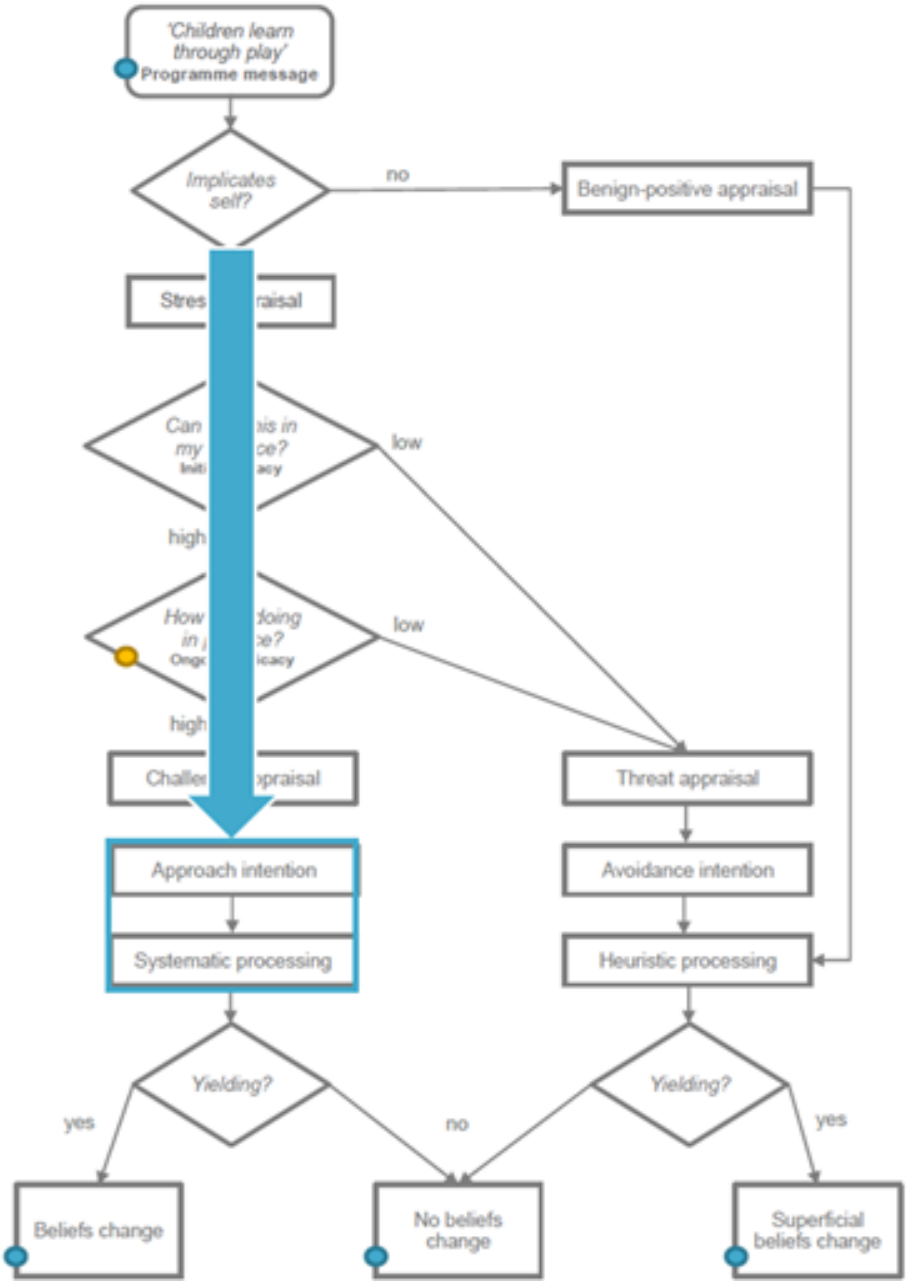


Figure 7: Diagram of Scenario C *Adopting*



5.2 Factors influencing sustained change

Both change models (Ohlhausen et al., 1992; Gregoire, 2003) highlight contextual factors as affecting the change process. For example, if an educator is not supported to implement a new approach by fellow staff and leadership, this circumstance can influence decisions to continue with existing, endorsed practices (Enyedy et al., 2006). According to Beltman and colleagues' (2011) review of teacher resilience, the most frequent challenges for beginning teachers centre on the school and classroom contexts: *school collaboration culture*; *guidance from trainers and mentors*; and the *classroom environment*. Heavy workloads, administration and demoralising policies constitute some the most often-cited challenges to teacher resilience (Beltman et al., 2011). Here, a supportive culture among colleagues, school leadership but also parents, is a major source of support (Gray, Wilcox, & Nordstokke, 2017; Howard & Johnson, 2004). Practical support from trainers and mentoring colleagues is another support source, and centres around instructional leadership (i.e. the teaching role) and behaviour management (Goddard & Foster, 2001).

Carefully designed mentorship programmes have shown positive results such as greater capacity among new teachers for self-reflection and problem-solving, improved confidence and self-esteem (e.g., Fantilli & McDougall, 2009). Finally, the classroom itself offers support sources in the form of positive student-teacher relationships (Brunetti, 2006; Morgan, Ludlow, Kitching, O'Leary, & Clarke, 2010). Ebersöhn spent ten years investigating resilience among South African teachers from disadvantaged settings (2014). She found 'flocking' to be an important supportive structure against the constant ebb and flow of adverse threats to the teachers' work. The South African teachers thrived when managing to overcome obstacles; not just within the classroom walls, but in a much wider community sense. Schools labelled 'supportive, inclusive spaces for learners' in Ebersöhn's study would extend support to parents, including daily meals, counselling and social work; in return, the school benefitted from parents' volunteering in maintenance, gardening and cooking (2014).

In conclusion, this doctoral study needed to consider contextual barriers and supports in addition to practitioners' educational beliefs and reflective approach and as an extension of teaching efficacy: beyond their judgement of capacity for using guided play in their own practice, efficacy for behaviour management and eliciting support had to be taken into account (Beltman et al., 2011). Important influencing factors

centred on the school and community culture, especially whether practitioners in the study were able to draw on 'flocking' or supportive structures to overcome challenges caused by lack of resources and heavy workloads, which extended beyond teaching responsibilities (Ebersöhn, 2014). After reviewing the CAMCC change process and contextual factors that might influence change journeys, the final section in this literature review considers the mediating roles of reflective ability and sense of efficacy. This is due to assumptions in the model that 'cognitive processing mediates attitude change' (Gregoire, 2003, p. 164), and that conceptual change in turn drives behaviour change in practice (p. 170).

5.3 Reflection and efficacy combine to mediate change

In the CAMCC, an important part of the efficacy process starts when practitioners experience trainers' modelling of the new approach, leading on to skill mastery through practice with feedback in a safe environment, and finally transfer of the new skill into practice (Wood & Bandura, 1989). The flowchart used to describe the CAMCC does not include a box dedicated to 'practice change' (Gregoire, 2003, p. 165), nor is this the aim of the model, according to Gregoire: 'The CAMCC (…) purports to explain the process of conceptual change in teachers' subject-matter beliefs.' (2003, p. 164). In the model, practice change is not deemed enough for lasting beliefs change to occur (Gregoire, 2003, p. 150), given that such change requires participants to first view their existing practice as being in need of changing. According to Gregoire Gill and colleagues, it takes deep reflection on beliefs and practice, along with trying out the new approach with support and feedback (fostering higher sense of self-efficacy) for lasting change to happen (Gill, Ashton, & Algina, 2004, p. 180). In earlier sections on epistemic beliefs, the reflective judgement model was introduced as a framework describing levels of reflective ability (King & Kitchener, 2004). This model offers two helpful insights.

On the one hand, ability to reflect is often a function of education. In her conceptualisation, Gregoire (2003) does not explicitly name well-educated teachers from Western educational contexts as the target group of the CAMCC, but examples are limited to this cultural group. Most of the practitioners taking part in the present study held a vocational certificate. This suggests a potential barrier for educational change if practitioners struggle to enter the systematic processing route. However, King and Kitchener's research also found that contextual support can improve

reflective ability (2004, p. 11). Gregoire (2003) likewise recommends supporting participants' to reflect on and enact new practices, understood as '…giving teachers time to think through the implications of reforms on their existing classroom practices. In addition, teachers must be provided with the appropriate conceptual training required to scaffold their understanding of the reform…' (Gregoire, 2003, p. 172).

A recent meta-analysis of reviews on research into continuous professional development and learning concurs, finding that effective trainings scaffold practitioner reflection (Cordingley et al., 2015). According to this review, effective programme designs provide participants with ongoing support and follow-up. For programmes, which did not offer frequent opportunities for practitioners to engage with implications for their professional practice '… neither extended time nor greater frequency of contact were sufficient to make substantial changes to teacher practice…' (2015, p. 8). Designing training and professional learning around a combination of guided reflection and scaffolded practice holds at least two advantages. First, those practitioners, who appraise the new approach as a threat due to lack of ability, knowledge, or resources are supported to raise their self-efficacy (Tschannen-Moran & McMaster, 2009). Second, practitioners may hold directive conceptions of teaching, derived from their own experiences as students. By combining modelling and mastery experiences with frequent, supportive feedback from competent others and opportunities to reflect, practitioners' conceptions of teaching can be elicited and challenged in a non-threatening manner (Wood & Bandura, 1989).

5.4 Concluding on the literature review

Summarising key points from the literature on guided play, studies show that dichotomies of play (child-led and unstructured) versus learning (adult-led and structured) have long dominated debates in early education research and practice, despite play and learning being naturally related. Recently, however, these prevailing discourses have begun to thaw, allowing for a spectrum of practices to emerge: child-led play, guided play and games, and instruction. For each of these practices, early educators have important roles that range from providing for and observing children's play to co-playing, guiding children's efforts and offering more targeted instruction. Realising children's engaged learning in guided play is of particular interest to the present study. This is a practice, which requires an intentional and tactful educator role – one of responding to children's cues, needs and interests without disrupting

their play. Two bodies of work were used to elaborate on this balancing act: responsive teaching and the autonomy-supportive (or facilitating) style of motivating. Both literatures highlight the importance of fostering child engagement by recognising their need for autonomy, competence and belonging – for example, with educators offering meaningful choices along with clear expectations; building on children's knowledge and interest, while challenging their understanding; and through warmth and patience. However, researchers find that early educators tend to switch between directing and withdrawing styles of interacting with young children, including in play. There is some evidence to suggest that professional 'lenses' and beliefs form part of the explanation. Hence, a number of relationships between practitioner beliefs and practices were considered in this review.

Fives and Buehl's (2012) model describes beliefs as attentional filters, frames and guides of classroom practices. In cases where educational beliefs are not congruent with practice, findings further indicate that practitioners could be unaware (Cheng, 2001), face constraints, such as pressure from leadership (Enyedy et al., 2006), or report a classroom ideal that they struggle to realise (Bryan, 2003). In short, the literature suggests a complex interplay between educational beliefs and practices. The present study aimed to investigate South African practitioners' educational beliefs, and how these interacted with their practice and adoption of play-based approaches. A revised version of Gregoire's CAMCC (2003) was chosen to guide the study design, focusing on the filtering role of educational beliefs (i.e., responding to the programme message), the heuristic and systematic processing routes and efficacy processes. Put briefly, this model contends that sustained beliefs change is likely if practitioners have opportunities to engage in deeper, effortful reflection along with scaffolded practice to bolster their sense of efficacy. In the next methodology chapter, the study's four research questions are presented, along with the design and methods chosen to address these questions.

Chapter three | study methodology

In the context of programmes promoting play-based practices, this study sought to explore practitioner change journeys, and develop a tool for identifying groups with different starting points and support needs. Reviewing the extant research literature, I was surprised to find few models explaining educational change for early childhood practitioners, and which would help trainers and developers to make informed decisions on programme designs. The final choice fell on the Cognitive-Affective Model of Conceptual Change model (CAMCC, Gregoire, 2003). This model addressed educator beliefs about learning and teaching (Fives & Gregoire Gill, 2015), together with personal factors found to influence professional learning and change. These mediating factors were participants' reflective orientation (*surface and deeper processing*, see Evans, 2008), and teacher self-efficacy (Tschannen-Moran & McMaster, 2009; Bandura, 1997). From a research perspective, the CAMCC comprised constructs with both sound theoretical and empirical work behind them. Viewed from my professional context, participant reflection and sense of self-efficacy were factors, which programmes might feasibly address.

In section one of this methodology chapter, I outline the study's research questions and mixed-methods design and introduce the South African early education context and participants. This section continues with a description of piloting efforts and key changes made during the study's preparation, data collection and analysis phases. The first section concludes with ethical considerations that informed the study design, including on participant involvement and informed consent, data confidentiality and issues of cross-cultural awareness. Section two presents an overview of methods used to address each research question. Sections three to five go into detail on each method of data collection, which was used to capture participants' educational beliefs, practices, and key indicators identified by the CAMCC. In section six, I describe how findings were combined to show change journeys for seven participants, whose data was sufficiently complete. Finally, section seven details the analysis approach used for the focus group data. Findings from these interviews served to contextualise change journey findings.

1. Research questions and methodology

From a methodological standpoint, a key question was how to operationalise the CAMCC for play-based practices and in the context of South African early education. The study's two-fold purpose was to gain a better understanding of practitioner change journeys and develop a diagnostic tool to identify groups among participants as they grappled with adopting guided play in their classrooms; this tool and model of change should be feasible to use in large-scale programmes, and yet offer enough insights to explain why practitioner journeys unfolded as they did. The four research questions below reflect the dual focus on contextualising the CAMCC's constructs in a novel setting, and exploring the model itself within a professional development programme. Research questions one and two focus on educational beliefs and practices among South African practitioners, asking to what extent these changed from study start to end. Research questions three and four explore why these changes did (or did not) take place for participants with different starting points, and how well the change model was able to account for these differences.

1. What are practitioners' educational beliefs, teaching efficacy and reflective orientation initially and later in the study?

1.1 What are their perceptions of play and learning?

1.2 What are their teaching conceptions?

1.3 What is their level of teaching efficacy, including for play-based approaches?

1.4 How do they reflect on practice (i.e. main orientation) and what concerns them?

2. Over time, how are practitioners' beliefs about play, learning and teaching reflected in their practice and interactions with learners?

2.1 How often are practitioners involved during play activities?

2.2 What roles do practitioners adopt in play contexts, and what learning opportunities emerge due to this involvement?

2.3 What characterises their teaching style in play and adult-led activities?

3. To what extent can the CAMCC account for differences and shifts in participants' beliefs and practices?

4. In cases where the model cannot explain shifts (or lack thereof), do other salient factors emerge for this cultural context?

In their seminal review of literature on teacher professional learning, Opfer and Pedder (2011) argue that identifying meaningful patterns of educational change requires both qualitative and quantitative modes of enquiry, with a model or theory underpinning the integration (Opfer & Pedder, 2011). This is because change journeys are complex, deeply personal and yet *patterned* processes: in line with social learning theory, their point is that educational change studies should recognise early educators as shapers of and shaped by their working context; for example, when avoiding situations they deem beyond their abilities and going for challenges they judge themselves capable of tackling (see chapter two, section 3). Instead of conceiving of professional learning and change in linear terms, they contend that educational change studies need to explore '…the patterned behaviour arising from agents interacting locally according to their own principles, beliefs, and interests…' (Opfer & Pedder, 2011, p. 396). In this study, the CAMCC provided this integrative model to identify key indicators of change journeys and explain how these might interact in complex ways. As such, I adopted a mixed methods design in order for findings to be relevant for the South African cultural context, while at the same time aiming for the model and methods to be adaptable for other cultural settings (Teddlie & Tashakkori, 2010; Riazi & Chandlin, 2014).

1.1 Methodology: balancing rigour and authenticity

When conducting educational research in underserved communities , bringing participants' understandings to light in an authentic and respectful manner is essential – both in terms of ethical research conduct and the trustworthiness of findings (Ebrahim & Penn, 2011). Often, this regard for authenticity translates to a close collaboration between researchers and participants as co-investigators (Creswell & Miller, 2000). However, early piloting efforts showed that my presence came in the way of participants sharing their own thoughts and opinions (see section 1.5 in this chapter). Consequently, I decided on another course. Perspectives from participants, partners and local researchers have been included in the study to ensure that findings were pertinent to this context, while I kept a certain distance to the research context. My intention was to achieve trustworthiness of findings for this research context, along with methods and a change model that were applicable for my own practice. In practical terms, data collection methods were carefully piloted, and more than one method was used to address each construct.

I also worked closely with a local research team and external advisors as cultural experts to critique assumptions made in the study. By making arguments for data collection and analysis accessible, both have been informed through our shared discussions (Gorard & Taylor, 2004). The local research team included Drs Jane Kvalsvig and Myra Taylor from University of KwaZulu-Natal and a research assistant fluent in the local language, Snenhlanhla Sibisi (Sne). Jane and Myra responded to a call for research collaboration, and following interviews with all applicants, their combined expertise and proximity to the training partner informed my choice of them as collaborators. Sne was one of five candidates applying for the position of research assistant. She had previous experience with collecting interview data, including on sensitive topics and from respondents in vulnerable circumstances. Sne was likewise from the same areas as the participants, and so represented an insider perspective for the culture and community. She was hired on a fixed-term contract from March 2016 to March 2017, and based at the University of Kwa-Zulu Natal. Before each data collection phase, I travelled to South Africa to work directly with the team and pilot methods. These trips included training sessions with Sne, where she and I practiced and refined the interview protocols, and piloted these with early educators who were similar to the study participants, but based at different centres. Sne would then collect data during the following months, under the supervision of Myra and Jane, as well as myself through weekly check-ins. At the end of her contract, Sne received a letter of recommendation, which acknowledged her essential efforts and skills in the study.

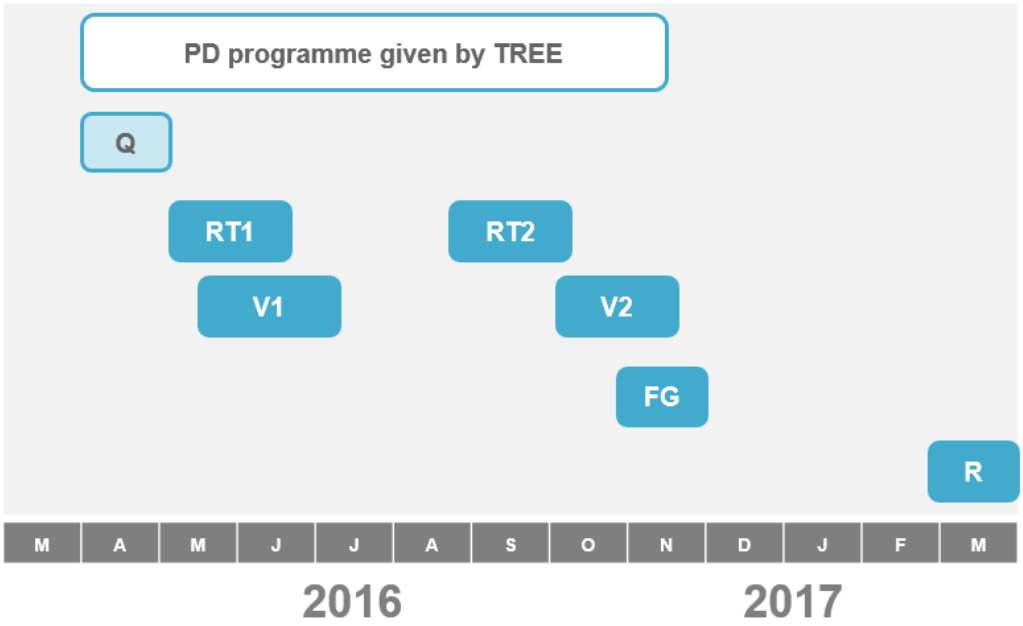
The external advisors were: Hasina Ebrahim and Vanessa Scherman from University of South Africa, trainer Linda Smith from Care for Education, four TREE mentors, and senior staff at TREE. These advisors were invited to contribute with contextual expertise on: questionnaire methods (Myra and Vanessa), more in-depth, observational methods (Hasina and Jane), and local classroom practices (Linda and TREE staff). The advisory group joined full research team before, during and after data collection. During these three meetings, they advised on researching in the South African education context, and reviewed the study's design, methods, and early findings through a South African cultural lens. Their insights informed several choices in the study including key changes (see section 1.5 in this chapter) and ethical considerations (section 1.6). For example, we agreed to strive for greater participant involvement through hosting focus group interviews with participants to

explore their working life, and challenge emerging findings in the study; as a group, we discussed early education discourses in South Africa, including signs and legacies of apartheid, which continue to shape young children's lives. Based on their own experience from researching in this context, they suggested removing the middle number from the questionnaire scale (see section 1.5.3-4 in this chapter), and qualified findings, including that young children's social skills are not often supported in Grade R classrooms.

1.2 Research design: exploring a change model

The literature review first of all showed that capturing educational beliefs, which inform practice, was not straightforward. For example, when asked directly during interviews or in questionnaires, many practitioners would readily express themselves in favour of child-centred and playful approaches, and yet this did not necessarily translate to playful practices (e.g., Wen, Elicker, & McMullen, 2011). In the study, I sought to capture those thoughts, concerns and beliefs, which did inform the practice of early educators working in this context. Secondly, the CAMCC had not been widely applied. A third issue centred on conceptualising playful practices within a South African cultural setting. The literature on young children's learning, development and play proved biased towards Western settings, rather than cultures on the African continent (Rudolph, 2017; Marfo & Biersteker, 2010). For guided play, specifically, studies to-date had mostly taken place in laboratory settings, and not in early childhood classrooms (Pyle, DeLuca, & Danniels, 2017). Taking these issues into account, the study was designed to corroborate findings for each CAMCC construct by combining in-depth methods with quantitative methods that could be applied at scale (see Table 1). This is known as 'multi-method-' (Creswell & Miller, 2000) or 'between-method triangulation' (Wellington, 2015). Figure 8 shows the study design and timing of data collection over the course of the professional support programme.

Figure 8: Study design and data collection



Abbreviations: Q = questionnaire, RT1/2 = reflective task 1/2, V1/2 = classroom visit 1/2, FG = focus group interview, R = revisit

The programme included a three-day 'kick-off' training in April 2016, followed by four cluster workshops over the course of the year. The clusters served as professional learning communities for participants located near one another. One TREE mentor was assigned to each cluster, and facilitated reflective sessions, new playful learning activities, and conducted classroom visits to support practitioners (see Appendix fourteen for further details on programme objectives and design). By mapping the change journeys of a selected group of participants, who took part in the programme, and holding their journeys up against the model's predictions, the CAMCC itself was also triangulated (i.e., *person triangulation*, Wellington, 2015).

The questionnaire was administered to all participants at the kick-off training (N = 96). On this occasion, TREE mentors were briefed on giving a research consent form, information letter and a self-report questionnaire. All respondents received an ID to ensure their anonymity, while also allowing for responses to be connected across methods. Based on questionnaire responses, a smaller group of participants was purposively selected (Wellington, 2015). Mapping their professional change journeys formed the central part of the study.

1.2.1 Selecting the focal participants

Two parts of the questionnaire were used to purposively select the focal participants. On the first page of the questionnaire, practitioners were asked for their demographic details, while Section B addressed perceptions of play and learning (see section 2.4 in this chapter); respondents rated different activities a young boy or girl might do as play and as learning (Fisher, Hirsh-Pasek, Golinkoff, & Gryfe, 2008) and items included more structured activities (e.g., 'Laying a puzzle') as well as unstructured activities (e.g., 'Using building blocks'). The researchers, who developed the perceptions questionnaire, Fisher and colleagues (2008), originally found three profiles among US mothers of young children: a *Traditional*, *All Play* and *Uncertain* perception profile. The *Traditional* profile clearly distinguished between structured and unstructured play, while profile two, *All Play*, tended to rate a wide range of activities similarly play-like. The third *Uncertain* group had more variable ratings than either the *Traditional* or *All Play* profiles. Using mean scores for factors identified by Fisher and colleagues (2008), I located similar responses among the South African practitioners and generated a list of five practitioners for each group. Between April 21-29, Sne recruited nine participants from this list, which represented the three groups evenly. Later, one practitioner chose to withdraw.

1.2.2 Data collection on practitioner change journeys

Between May and November 2016, the eight focal participants were visited in their classrooms twice (see Figure 8). During these visits, Sne recorded two videos of their classroom practice, focusing on their roles in play and style of teaching. Once the lessons of the day had concluded, she then conducted a one-hour interview using recordings from that day. This was done to elicit their classroom decision-making (interview part one), teaching conceptions (interview part two) and perceptions of play and learning (interview part three). For full details on the interview procedure, see section 2.5 in this chapter. Returning to Figure 8, these visits are indicated as V1 and V2. RT1 and RT2 indicate a written, reflective task where the participants rated their sense of self-efficacy for teaching the curriculum through play and wrote a brief justification for their response. The task was given at cluster workshops 2 and 3 by the four TREE mentors. A focus group interview with the selected group took place at the end of the year (FG in Figure 8). Here, the interview questions centred on the practitioners' working life, concerns, and other factors emerging as salient up until that point, and so served to contextualise findings. Five classroom revisits, which

took place in March the following year, are marked with an R in the overview (see section 1.5 on piloting and changes to the study design). These visits took place in the next term, where practitioners had received a new group of young Grade R learners. Table 1 below summarises methods used to address each of the four research questions, as well as which participant group responded at each data collection point.

Table 1: Overview of methods by research question

Methods (and sub-sections)	Research questions
All participants (N = 96)	
Self-report questionnaire • *Section A:* Perceptions of play and learning (based on different activities a young boy or girl might do) • *Section B:* Teaching efficacy	 RQ 1.1 RQ 1.3
Focal participants (N = 8)	
Practitioner interviews • *Section A:* Video-stimulated recall to elicit practitioners' thoughts and feelings while teaching • *Section B:* Comparing adult roles during the play and adult-led activities to elicit teaching roles and conceptions • *Section C:* Three video examples of child activities (visit 1) or card sorting game to elicit perceptions of play and learning (visit 2 / revisit)	 RQ 1.1 / 1.2 / 1.4 RQ 1.2 RQ 1.1
Reflective task on efficacy for teaching the curriculum through play On a scale from 1-10, practitioners rate their efficacy for using play-based teaching approaches and write a brief justification.	RQ 1.3 / 1.4
Video recordings of classroom practices • One play activity • One adult-led activity	RQ 2.1-3
Method integration (mapping change journeys against the CAMCC)	RQ 3
Focus group interview (salient factors that may influence change journeys)	RQ 4

As noted in the introduction to section one of this chapter, the CAMCC provided an integrative model, which identified key indicators of change journeys and scenarios to explain how these might interact in complex ways. The study's mixed methods design aimed to ground findings in the South African cultural context, while at the same time, develop methods that could feasibly be used at scale in other cultures. Linking data collection methods with the CAMCC, the first point in the model – whether practitioners felt implicated by the training message 'Children learn through

play' – was addressed at the first training using section A in the questionnaire on perceptions (see Table 1). Initial sense of teaching efficacy was captured by questionnaire section B. Processing route – if practitioners reflected more or less deeply on facilitating children's learning in play – was addressed through two data sources: video-stimulated recall interviews and the reflective tasks. These tasks also elicited practitioners' ongoing sense of efficacy for teaching the curriculum through play. Finally, data on changes in practitioners' educational beliefs and practices were collected during classroom visits: recordings of teaching practices (one adult-led and one play activity) and interview sections A-C.

1.3 The research context

In their working life, many educators in South African face poverty-related adversity, particularly in townships and disadvantaged settings (Albino, 2013; Ebersöhn, 2014). Schools struggle with basic resources such as missing textbooks, large class sizes and poor facilities, understaffing and teacher absenteeism (Statistics South Africa, 2015, p. 21). Hunger among children also causes challenges. In 2011, more than 75% percent of learners attending public schools received free meals through a government nutrition programme; other issues include community and school violence; while the percentage of children experiencing corporal punishment at school has decreased, the number remains high at 12.4% (Statistics South Africa, 2015, p. 23). Together with poor health in the population, vulnerable and even orphaned children, South African educators' working conditions are characterised by 'cumulative and chronic stressors' (Ebersöhn, 2014, p. 570). The negative effects of adversity extend to young children, with toxic stress affecting their development (Noble, McCandliss, & Farah, 2007; Bradley & Corwyn, 2002). Drawing on research into stress physiology, neurocognition and children's self-regulation, Blair and Raver (2012) identify interactions with warm and responsive adults as a central mediating factor. Reviews on preschool outcomes (Yoshikawa et al., 2013) and training studies with early childhood professionals (Egert, Fukkink, & Eckhardt, 2018) agree that promoting responsive interactions between educators and their learners, including in play, holds a mitigating potential.

1.3.1 Early education and play in South Africa

As noted in the literature review, educational provision for children ages 5-6 (called "Grade R") has expanded massively in South Africa, with access being the main priority (Van der Berg, 2013). However, recent evaluations of Grade R conclude that poor quality remains an issue and that '…practitioners have limited understanding of their role in child development' (Van der Berg, 2013, p. 3). Despite efforts to upskill the workforce, training levels continue to vary greatly among educators (Richter & Samuels, 2018). This becomes even more important when considering that playful pedagogies entail a responsive role, where the educator supports young children's playful explorations and guides their efforts with a learning goal in mind (section 1.3 in chapter two). According to South African researchers spanning theory (Excell & Linington, 2011), in-depth empirical studies (Shaik & Ebrahim, 2015; Aronstam & Braund, 2015) and evaluative reports on early childhood provision (Berry et al., 2013), early educators in Grade R are unfamiliar with this middle ground of playful pedagogy. In some ways, 'play' and 'pedagogy' are seen at disparate concepts: in the first, educators have a role to observe and keep children safe, while second concept, pedagogy, centres on the adult providing an educational environment, along with teaching and learning strategies (Aronstam & Braund, 2015; Excell & Linington, 2011). While guided play approaches seem to hold promise for young children's engaged learning and development in South Africa, even to mitigate some of the adverse effects they face, evaluations also suggest several challenges associated with realising these approaches.

On the learning environment, Figure 9 and Figure 10 below show a typical Grade R classroom and a theme table with materials relevant to 'My Body'. Classrooms are often organised into play centres that afford a range of activities: a fantasy area with dress-up clothes, quiet areas with books, creative corner for cutting and pasting, construction corner and an area with toy cars. The theme table sits close to a desk or office and is not for playing.

Figure 9: Typical setup in Grade R classroom

Figure 10: Example of theme table

1.3.2 Purpose of the professional support programme

The present study was conducted in the context of a pilot professional development programme for Grade R practitioners (see Appendix fourteen). The purpose of the programme was to explore the potential for clusters (i.e., communities of practice) to assist practitioners in translating theory on children's learning through play into practice. The training organisation, TREE, provides accredited qualifications for early childhood professionals in the Kwa-Zulu Natal province. Each year, TREE trains more than 2000 early childhood practitioners in the accredited NQF (National Qualifications Framework) Level 4 qualification, as well as continued professional development (TREE proposal, 2015, unpublished).

1.4 Study participants

In April 2016, 96 practitioners attended TREE's kick-off training session the pilot support programme. All were women working in Grade R classrooms located in rural or semi-urban areas. Each training attendee was invited to join the study and consented to respond to the questionnaire. The focal participants later gave separate consent to receive classroom visits with video recordings of practice, interviews and a focus group interview (see ethical approval and consent forms in Appendices one to four). Descriptive data for the full group is listed in Table 2 and show participants to vary greatly in terms of learners attending their class (12-68 children), age (23-64 years), years of teaching (1-30 years) and number of colleagues at each site (1-22).

Table 2: Descriptive statistics for all participants

	Responses (N)	Min.	Max.	Mean
Class size	94	12	68	29.6
Age in years	96	23	64	40
Years of teaching	89	1	30	8.6
Number of colleagues	89	1	22	5.4

Table 3 shows descriptive data for the group of focal participants (names are pseudonyms). In addition to their initial perceptions, this group was purposively chosen to represent a diversity in age (33-63 years of age), class sizes (16-48 children), and teaching experience (2-30 years of teaching) similar to the full group. In the present study, five of eight participants held a vocational degree accredited at South Africa's National Qualification Framework (NQF) level 4. This meant they were certified to teach in Grade R, having completed an 18-month in-service qualification course with TREE. Two practitioners had obtained high school degrees, equivalent to NQF level 4 (SAQA, November 2012), and one practitioner held a diploma (NQF level 6, higher education degree). The next section addresses several key changes, which took place during the study planning and data collection phases.

Table 3: Descriptive statistics for the eight participants

Participant (pseudonym)	Age in years	Class size	Highest level of education	Years of teaching
P1 Maude*	54	16	High school graduate	2
P2 Anele	64	48	Vocational certificate	30
P3 Fikile*	33	22	High school graduate	9
P4 Lisa*	59	16	Diploma	12
P5 Lihle*	50	31	Vocational certificate	6
P6 Liyanda*	37	37	Vocational certificate	10
P7 Thembi	28	30	Vocational certificate	8
P8 Martha	36	22	Vocational certificate	13

*Participant received a third visit in March 2017

1.5 Piloting and key changes in the study

Conducting educational research is never simple and straightforward: the 'study objects' – for instance, classroom practices and relations among children and adults – constantly evolve in response to one another. Beyond this is the complexity of the surrounding environment, including colleagues, leadership, community, parents, government and a myriad of other stakeholders, and you have a shifting, living landscape. Then add the complexity of conducting a study on educational change where the researcher sits in Northern Europe and the research context is rural and urban South Africa. In the present case, the result was important lessons learned from designing the study and piloting methods. In this section, I reflect on early insights from engaging with the South African practitioners, and outline key changes made to the study – including setting up a local research team to help even out power relations with participants, contextualise methods and findings, and revising data collection methods.

1.5.1 Contextual challenges

The key difference between what I originally envisioned and the final study design (see Figure 8) was scale: in the first design, patterns of change for the entire group of 96 practitioners were meant to be captured as well; this way, changes observed for the smaller group could provide insights on those seen at scale. As it happened, visiting practitioners proved to be very time consuming; it could take hours to reach a

site, especially in rural parts of the province. Some sites were located in areas with high crime rates, and we deemed an escort necessary. This required booking a driver for a full day, fitting visit into time slots in their schedules. Consequently, mapping focal participants' change journeys was prioritised in line with the study purpose.

1.5.2 Compliance and unintended authority

In South Africa, the country's apartheid past continues to shape everyday life. Inequalities persist between the privileged and the underserved; that these also manifest in meetings between people from outside the country became a realisation and turning point early in the study. In 2015, I was piloting interviews with a small group of practitioners. The group was attending training at TREE's offices, and the workshop programme for the day had just ended. Three practitioners had volunteered for the practice interview, and we sat together on a bench outside, next to a Jungle Gym and slides. Throughout the interview, I remember having a good rapport with the group; we were joking and laughing together. I tried to minimise any sense of hierarchy between us, ensuring they felt heard and that their opinions were valued. Towards the end of our conversation, they were invited to ask any questions coming to mind. For all three, their question was: 'Can you help me get into a university or fund me to get a degree?' Somehow, an unintended hierarchy had asserted itself. I was not seen as an equal person or a student researcher, but as a potential funder with means I could exert in their favour.

This experience repeated itself when I piloted questionnaire items. This time, I visited practitioners in their classrooms, asking them to rate different activities children might do on a scale, share their justifications, and think of examples of play activities they saw their learners engage in. Despite my efforts to the contrary, there was a skewed power-relation: The practitioners were eager to comply and give me 'correct' answers, rather than their own thoughts and opinion. In short, I felt in the way of my own study. I still agree that authenticity and participant involvement should be at the heart of research conducted in people living in underserved settings . But equally, I find it important to not lose sight of '...empirical rigour in the process, in order for the work to have a sharper focus and impact outside the immediate community in which the research takes place' (Ebrahim & Penn, 2011, pp. 214-5). As noted earlier, these reflections informed my decision to take a step back from the research context, and work closely with a local team.

1.5.3 Piloting of the efficacy questionnaire

The efficacy questionnaire was piloted in two phases. In May 2015, a questionnaire on teaching efficacy was tested to see if factors emerged in this context to match those of earlier efficacy studies. Items for the pilot questionnaire were drawn from Sharma and colleagues' (2012) TEIP scale, as this scale had been used previously with South African teachers (Malinen et al., 2013). At the time, TREE was using an educational tool called Six Bricks, and six out of fourteen questionnaire items were adapted to mention this tool, specifically. The piloting took place during a TREE training event where 72 Grade R practitioners responded to the questionnaire at the start and at the end of the training.

Table 4: Factor loadings for pre- and post-training responses

Pilot questionnaire item	PRE-test factor loadings			POST-test factor loadings		
Factors:	**1**	**2**	**3**	**1**	**2**	**3**
1 *I can run Six Bricks activities with learners in my class*		**.799**		.404	**.486**	
2 *I can get learners to enjoy coming to my centre or school*		**.605**		**.631**		
3 *I can use questions to get learners to think and give their own answers*		**.729**		.552	**.659**	
4 *I can keep learners focused on a difficult Six Bricks activity*	**.649**	.440		**.778**		
5 *I can give more than one explanation or example when learners are confused*	.486	**.537**		**.732**		
6 *I can adapt Six Bricks activities to meet the needs of different learners*		**.731**		**.482**		
7 *I can accurately tell how well learners understand what I have taught*	**.514**			**.703**		
8 *I can make Six Bricks activities that fit very capable learners*	.531	**.569**		**.726**		
9 *I can get learners to work in pairs or small groups during Six Bricks activities*		**.435**		**.476**		
10 *I can calm a learner who is disruptive during a Six Bricks activity*	**.807**			**.411**		
11 *I am able to get learners to follow classroom rules*	**.831**			**.629**	.493	
12 *I can assist families in helping their learners do well in my class*			**.582**	**.615**		
13 *I can improve the learning of a child who is struggling*			**.904**	**.470**		
14 *I can get parents involved in activities at my school or centre*	**.700**		.439	**.634**		.404

As recommended by Bandura (2006), I briefly explained the scale and guided practitioners using three mock items. Exploratory Factor Analysis (EFA) was then used with the pre- and post-training data. Factors were first extracted for pre-training responses (KMO for sampling adequacy = .791). For this data, three factors emerged with an eigenvalue of 1 or more: factor 1 (6.321), 2 (1.872), and 3 (1.164), explaining 45.15%, 13.37% and 8.32% of the variance respectively. Next, factors were extracted for post-test responses (KMO for sampling adequacy = .809). Again, three factors emerged with eigenvalues above 1, however, the percentage of variance explained decreased slightly overall: Factor 1 (39.21%), 2 (14.02%) and 3 (9.23%). Scree plot analysis corroborated the presence of three factors for both pre- and post-training data. Following Sharma and colleagues' analysis approach (2012), factor structure was determined using principal component analysis with varimax rotation, and items with a factor coefficient above 0.4 were included. For this pilot data, three factors emerged more clearly for pre-training responses (see factor loadings in Table 4). This suggested that practitioners' judgement of capacity to teach in own practice could be sensitive to training input, and that their responses would be more reliable if captured closer to their practice. Based on the piloting results, I adopted the revised version of the TEIP scale in the study.

1.5.4 Piloting of the perceptions questionnaire

As no studies were found that had used the questionnaire on perceptions of play and learning outside the US, perception items from Fisher and colleagues' study (2008) were piloted in the South African context, exempting those referring to electronic devices. This piloting was done through face-to-face interviews with five practitioners, which made it possible to ask respondents what a specific item represented to her. Through this approach, item 13 (organised activities and playgroups), and item 10 (children having play dates) proved unsuited to this cultural context. Practitioners also suggested additional items such as music and rhythms, and children dancing, since these activities often featured in their learners' play. During these interviews, an interesting bias emerged. When asked to elaborate on items, which practitioners had rated lower on both play and learning, their main reasons revolved around lack of materials and toys and not the nature of the activity itself (i.e., more or less playful or setting a base for academic learning). In order to address this bias, additional items were generated together with TREE trainers, featuring activities that did not depend on specific toys. This led to a final list of 18 contextualised items for the perceptions

questionnaire: 11 unstructured and 7 structured activities items (see Appendix six). Based on recommendations from the advisory group (see section 1.1 in this chapter), the original Likert scale of 1-7 was also changed to a 1-6 scale to avoid default middle responses.

1.5.5 Revisions to data collection methods

Two main changes in the data collection took place underway in the study. Initially, the plan was to include a task eliciting teaching conceptions by asking about teacher metaphors. This task was adapted from one used with South African student teachers (Rusnyak & Walton, 2014). However, the task proved inappropriate in that it seemed to suggest to participants that a specific answer or metaphor might be more 'correct' – hence, this task was dropped. Finally, technical challenges led to changes as well. Given the set-up with data collection being delegated to a research assistant and the vast geographic distances between our respective offices, such issues were probably unavoidable. For five participants in the selected group, issues with uploading from the audio recorder meant that interview data from their second visit was incomplete. We decided to carry out a third visit for these five participants from February 27 to March 10 in 2017, which took place in a new term period. Hence, the practitioners were working with a new group of Grade R learners. Otherwise, the visits followed the same approach as before with two videos recorded of practice and interviews conducted at the end of day. Later, one video-file out of forty-two was corrupted half-way through the analysis phase. In this case, video transcripts and narrative descriptions of the video provided back-up data.

1.6 Ethical considerations

Ethics form an integral part of any study – especially for educational research, which involves people, and often children (Wellington, 2015). Further to this point, the study took place in vulnerable contexts – practitioners' time with young children in their class was a valuable resource not be taken up with unnecessarily intensive research activities. As the piloting had revealed, careful attention needed to be paid to skewed power relations between participants and researchers, just as methods and analyses should consider culturally-founded perceptions when making sense of the data (Qureshi, 2011). As a first step, these concerns were addressed through engaging a local research team to act as participants' point of contact and to contextualise findings (section 1.1 in this chapter). Then, data collection was embedded in the pilot

programme, which the participants had joined on a voluntary basis. I strove to make the study as feasible and unintimidating as possible by embedding most research activities into scheduled training sessions and cluster meetings, and keeping individual interviews short (see description in section 2.5 in this chapter). In cases where practitioners did travel to participate in interviews, we offered meals and transport compensation. As a token of appreciation, all practitioners, who participated in video recordings of practice and interview session, received an educational LEGO® set with Duplo figures featuring familiar jobs.

1.6.1 Considering the study beneficiaries

Presenting practitioners with a gift was a small gesture that spoke to a critical dimension of power relations in research: some people gain, while others give much and gain little. When studies are carried out with people whose access to resources, education, and employment is affected by disadvantaged circumstances, researchers must consider how participants might benefit from studies they contribute time and insights to. From responses and questions asked during the piloting, the South African practitioners did indeed look for opportunities to improve their situation and prospects. I found this significant obligation one of the hardest to meet – not for lack of good intentions or recognition of ethical concerns. But timing, distance and the nature of the study design presented challenges: while data was collected in 2016 and early 2017 with the help of the local research, I conducted all analyses, and these were not completed until early 2019. One option was to share findings on an ongoing basis during data analysis. However, without also involving practitioners much more closely to ensure any questions they might have would be properly acknowledged and addressed, this approach did not seem ideal either. Again, physical distance and the study setup made it a difficult solution to realise. After discussing options with the research team and advisors our final compromise was to ensure that future programme participants might benefit from study findings. This was in addition to disseminating results to the South African ECD sector and embedding findings in the LEGO Foundation's own research and programmatic efforts. In consultation with TREE, I organised a briefing workshop with their team in 2018. In that same year, I shared early study findings during a Knowledge Building Seminar in Pretoria. This seminar is an annual event hosted by UNICEF South Africa and the LEGO Foundation, with attendees from local NGOs and early childhood care and education providers.

1.6.2 Obtaining participants' informed consent

The study followed ethical guidelines recommended by the University of Kwa-Zulu Natal (UKZN) and the University of Cambridge, and approval was obtained from ethics committees at both universities (see Appendices one and two). The ethical guidelines outlined appropriate procedures for explaining the study's nature and purpose to participants, obtaining their informed consent, ensuring participant anonymity and treating data confidentially and securely (BERA, September 2011; BPS, August 2009). Using templates issued by the UKZN Humanities and Social Sciences Research Ethics Committee, two consent forms were prepared, translated to IsiZulu and administered in the study – one form for respondents to the questionnaire and reflective tasks and a second consent form for participants in the in-depth part of study, which involved interviews and classroom video recordings (see Appendices three and four). The consent forms described the purpose of finding out what practitioners thought about play-based learning and in context of the support programme, making it clear to participants that: *"Although you may not benefit personally, we hope that the study will create benefits for the training of future practitioners, as we will understand better what training is required."* All research activities and their expected duration were described, as well as opportunities to contact the research team for more information or to withdraw from the study. On two occasions, the kick-off training and cluster workshop 4, the four TREE mentors were briefed on giving the consent forms and an information letter for the ECD site supervisors. In preparation for classroom videos and interviews being recorded, Sne would remind practitioners of the study's purpose, what a given research activity entailed, and that there was no question of right or wrong answers. Having confirmed participants' consent, recordings started.

1.6.3 Anonymity and data confidentiality

All participants received an ID to ensure their anonymity, while also allowing for their responses to be connected across methods. This ID and their name were attached to the questionnaires and reflective tasks as a slip of paper that was later removed, so that all data collection tools showed only practitioners' study ID. Video and audio files, responses to questionnaires and reflective tasks were uploaded to a password-protected server to which the research team had sole access. For inter-rater purposes, I printed hard copies of interview transcripts, so these could be returned. Videos and transcripts needed for inter-rating were copied and put in separate folders

on the server with temporary access for inter-raters. Finally, a list of practitioner names and identifying details was kept separate from their data. This list was needed to recruit participants for the in-depth part of the study, based on responses to the self-report questionnaire (see section 1.2.1 in this chapter). These practitioners further received pseudonyms, which have been used throughout this thesis. Upon their own request, the TREE team has been named as an organisation.

1.6.4 Cultural awareness and reflexivity

Educational research relies on the researcher's judgement, cultural perceptions, experiences and understanding. Given the study's purpose of exploring South African practitioners' beliefs and practices on learning through play, there was a strong risk of me imposing own notions of childhood, early education and play practices on the practitioners' responses. Hence, I have taken several steps to achieve trustworthiness of findings: For data collection analysis, adopting a study design of triangulating methods to capture change model constructs was one important step; another was to work with a local research team and advisory board (section 1.1 in this chapter). For instance, during the data collection and early analysis phases, I kept a record of research activities and key decisions made, and this record was reviewed by the study's advisors and research team during our meetings (see excerpt in Appendix five). For the analysis of beliefs, I also engaged fellow doctoral students in 'data surgery,' where they read copies of interview transcripts, made notes and shared thoughts on topics the interviews seemed to touch upon. Beforehand, I had deliberately not shared my research interest (i.e., educational beliefs) but asked for fresh eyes on the data. In their reflections, the group noted how the interviewees described relations with their children in their class, learning goals and intents for activities, perceptions of play and their own role as educators.

Other efforts to ensure trustworthiness focused on being mindful of the practitioners' culture and working lives. For this purpose, TREE staff, who were native to the area, joined sessions to help interpret findings – this was not member checking, which would have to involve practitioners themselves (Creswell & Miller, 2000) but an approximation, which served to ensure that findings made sense in the local culture. In one session, I shared initial findings from the analysis of questionnaire data on play and learning perceptions, and here, the TREE team helped to label factors (see chapter four, section 3.1).

The point of all these different efforts was to challenge my assumptions and ensure relevance of findings for this research context. Parts two and three in this chapter, which follow below, return to the study's research questions and describe methods for data collection and analysis in detail.

2. Methods for data collection

This second section returns to the study's four research questions, and presents overviews of methods and analysis approaches chosen to address each question in turn. Following this overview, each data collection method is described in detail: the self-report questionnaire, individual interviews, reflective tasks, observations of classroom practices and focus group interviews. These descriptions are followed by sections three to five on approaches used to analyse each of these data sources, how findings were integrated to map practitioner change journeys (section six), and finally, the approach used to analyse focus group responses (section seven).

2.1 Methods addressing research question one

The study's first question concerned practitioners' beliefs and mechanisms, which the CAMCC had identified as influencing their change journeys. Beliefs of interest were participants' play and learning perceptions, and conceptions of 'good' teaching. Two mechanisms featured as well, namely sense of efficacy for teaching, including through play, and reflective orientation. Table 5 below lists research questions 1.1-4, methods combined for each construct, and the analysis approach adopted. In Table 5, one data collection method, rather than two, is listed for research question 1.2; beyond interviews a reflective task on teaching metaphors was planned as a complementary data source, but this task was later dropped. Instead, data on teaching conceptions consisted of the video-stimulated recall of thoughts and feelings while teaching and prompts on teaching roles in play and adult-led activities (sections A and B of the interview).

Table 5: Methods combined to address Research Question 1

Method-triangulation: all participants and focal participants		
Research question 1: What are practitioners' educational beliefs, teaching efficacy and reflective orientation initially and later in the study?		
Sub-question	**Method combination**	**Analysis approach**
1.1 What are participants' perceptions of play and learning (initially and later)?	Questionnaire section C on practitioners' perceptions of play and learning. Statements from interview section A (VSR) and section C (prompting of play and learning perceptions).	Exploratory Factor Analysis and cluster analysis to identify perception profiles. Thematic analysis of play and learning perceptions.
1.2 What are their teaching conceptions (initially and later)?	Statements from interview section A (VSR) and B (prompting of teaching role in the two classroom videos).	Thematic analysis of beliefs about teaching, own role and learners' role in class.
1.3 What is their level of teaching efficacy, including for play-based approaches (initially and later)?	Questionnaire section B on practitioners' overall sense of teaching efficacy. Reflective task on efficacy for teaching the curriculum through play (with score and written justification).	Analysis of efficacy items to establish practitioners' level of efficacy for teaching. Reasons for task scores summarised and compared with questionnaire results.
1.4 How do they reflect on practice (main orientation) and what concerns them (initially and later)?	Statements from interview section A (VSR). Written responses to the reflective task.	Statements coded for reflective orientation. Reflective profiles contrasted with reflective task responses.

2.2 Methods addressing research question two

The second research question referred to practices observed for the focal participants, based on videos of their practice from early and later in the study (see Table 6): how often practitioners were involved during play (2.1), roles they assumed in play and learning opportunities afforded by their presence (2.2), and finally, what characterised their teaching style across play and adult-led activities over time (2.3). As noted in the literature review (see chapter two), adult-facilitated play in classroom contexts is under-researched, especially for African cultural contexts; as such, using an in-depth, thematic analysis approach seemed most appropriate to address the two first sub-questions.

Table 6: Methods used to address Research Question 2

Changes in practice over time: the focal participants		
Research question 2: Over time, how are practitioners' beliefs about play, learning and teaching reflected in their practice and interactions with learners?		
Sub-question	**Data sources**	**Data analysis**
2.1 How often are practitioners involved during play activities initially and later on?	21 classroom videos of play activities featuring the eight focal practitioners.	Instances identified using predefined criteria for play facilitation and guided play.
2.2 What roles do practitioners adopt in play contexts, and what learning opportunities emerge due to this involvement?	21 classroom videos of play activities featuring the eight focal practitioners.	Thematic analysis of practitioner involvement and roles during play.
2.3 What characterises their teaching style across play and adult-led activities - both early on and later in the programme?	42 classroom videos of adult-led and play activities.	Videos scored on three teaching styles using the Early Childhood Classroom Observation Measure.

The case was different for research on classroom interactions, which was the focus of research question 2.3. This field has seen several larger observation studies, with measures developed and tested across cultures. For the question on teaching styles, I adapted an existing measure to analyse classroom interactions during both adult-led and play activities: the social climate subscale from the Early Childhood Classroom Observation Measure (ECCOM, Stipek & Byler, 2004). This made it possible to compare how practitioners interacted with learners in the two activity types, over time and across the group.

2.3 Methods used for research questions three and four

The third and fourth research questions addressed the change model itself by integrating findings on educational beliefs, change mechanisms and practice. For each focal participant, results were combined to determine changes over time (see Table 7). If the change model accurately predicted practitioners' change journeys, then certain patterns would emerge (see the predicted change journeys in chapter two, section 5.1). If not, this would suggest a need for modifying the model. Here, findings from the focus group interview in particular would offer avenues for further efforts (research question four).

Table 7: Methods used to address Research Questions 3 and 4

Person-triangulation: the focal participants		
Research question	**Method-integration**	**Combined analysis**
3. To what extent can the CAMCC account for differences and shifts in the selected participants' beliefs and practices?	*Educational beliefs:* Practitioners' perceptions of play and learning and teaching conceptions. *Practice:* Practitioners' roles during play activities and overall teaching style. *CAMCC mechanisms:* Teaching efficacy and main reflective orientation.	Practitioner change journeys are mapped by combining shifts in their beliefs and practice with level of teaching efficacy and reflective orientation. Findings contrasted with the three change scenarios predicted by the CAMCC (Unconcerned, Avoidant and Adopting).
4. In cases where the model cannot explain shifts (or lack thereof), do other salient factors emerge for this cultural context?	Focus group interviews with focal practitioners .	Thematic analysis of notions of professionalism, personal and contextual factors, which could explain model inconsistencies. Findings contrasted with practitioner change journeys.

2.4 Self-report questionnaire

Educational beliefs researchers have used questionnaires as a time-efficient way to collect data, allowing for patterns in responses to be detected (Fives & Gill, 2015). However, when comparing practitioners' self-reported beliefs and their enacted practices, several studies have reported discrepancies (Wen, Elicker & McMullen, 2011; Wilcox-Herzog, 2002). Part of this issue is thought to relate to levels of measurement specificity (Glasman & Albarracín, 2006; Limon, 2006; Ajzen & Fishbein, 2000). For instance, if practitioners respond to general questionnaire items on developmentally appropriate practice, their answers may not align with concrete classroom practices (Heisner & Lederberg, 2011). Instead, the recommendation is to measure beliefs and classroom practices at a similar level of specificity (Limon, 2006). A recent meta-analysis of studies investigating teacher self-efficacy and commitment supports this point. When studies used task-specific questionnaire items, this resulted in improved predictions between teachers' commitment and their self-reported self-efficacy beliefs (Chesnut & Burley, 2015). On this basis, two questionnaires were chosen for the present study: a perceptions questionnaire developed by Fisher and colleagues (2008) and Sharma and colleagues' (2012) Teacher Efficacy for Inclusive Practices (TEIP) scale. Both are described below.

On the first page of the questionnaire handout, respondents were asked about their age, years of teaching experience, number of children in their classrooms and colleagues at their workplace. Section A of the questionnaire asked about their sense of teaching efficacy (Sharma, Loreman, & Forlin, 2012). In Section B, respondents rated different activities a young boy or girl might do as play, and as learning (see section 2.4.1 below). As a final step, the questionnaire was translated to IsiZulu by Sne, and back-translated by TREE staff to ensure terms were used as intended. The full questionnaire was administered at the start of the training session.

2.4.1 Play and learning perceptions

In their study with US mothers of young children, Fisher and colleagues (2008) found that 'degree of structure' was an important factor, which seemed to underpin responses: 44% of respondents clearly distinguished between structured and unstructured play (*Traditional*); 45% rated a wide range of activities similarly play-like (*All play*) and 12% had highly variable ratings (*Uncertain*). As such, the responses form a pattern of either a) separating play and learning activities or b) seeing play and learning as related or even integrated concepts. This pattern resonates with findings in early education research (McMullen et al., 2006; Cheng, 2001), and echoes tensions often observed in education research, with teachers both feeling a need to control the flow of activities in the classroom and also to support children's sense of autonomy (e.g., Toub et al., 2016; Emilson & Folkesson, 2006). This phenomenon has also been noted in South African early education (Shaik & Ebrahim, 2015), suggesting that play beliefs are less about favouring play per se, than about whether play is perceived as a learning context and in what way.

The questionnaire developed by Fisher and colleagues (2008) covers unstructured activities children might do (e.g. 'Throwing a ball') and more structured activities (e.g. 'Having a book read to them'). Free, unstructured activities are defined as 'requiring imaginative or creative processes, often lacking clearly delineated rules or goals' while structured activities are seen as having an 'inherent goal-oriented structure' (Fisher, Hirsh-Pasek, Golinkoff, & Gryfe, 2008, p. 309). In their original version, respondents rated how much each activity is a form of play, and how much it sets a foundation for academic learning on a Likert-type scale ranging from 1 to 7 (e.g. 1 = *this is definitely NOT a form of play* to 7 = *this is definitely a form of play*). Following piloting in this study, an 18-item questionnaire was developed with 11 unstructured

and 7 structured activities items (see Appendix six). During face-to-face piloting of the questionnaire items, respondents had a tendency to choose the middle score by default. When consulting advisory board members, they recognised this tendency and recommended a shorter scale. Hence, the original Likert scale of 1-7 was changed to a 1-6 scale to avoid a middle number.

2.4.2 Practitioners' sense of teaching efficacy

This study was concerned with two aspects of teacher efficacy: efficacy for teaching overall (as in higher or lower initial efficacy) and efficacy specific to using guided play to teach the Grade R curriculum. The method chosen to address this second aspect, a reflective task, is described in section 2.6 in this chapter. The first aspect, overall sense of teaching efficacy, is widely researched using questionnaires with subscales of related, latent factors; two recurring domains are efficacy for instruction and for behaviour management, and these are typically combined with a third domain. For instance, the Teacher Sense of Efficacy Scale (TSES, Tschannen-Moran & Hoy, 2001) has four items on three subscales: efficacy for instructional strategies, for classroom management and for student engagement. This instruments' three-factor structure was confirmed across cultural settings by Klassen and colleagues in a later study (2009), though African countries were not included here.

The Teacher Efficacy for Inclusive Practice (TEIP, Sharma et al., 2012) is another scale, which has seen cross-cultural use. While items in the TEIP scale refer to support for students with disabilities, the scale itself follows a similar three-factor structure for teaching efficacy: instruction, behaviour management and collaboration with parents and other professionals (Sharma, Loreman, & Forlin, 2012). Importantly, this scale had seen previous use in South Africa, with positive results in terms of validity for this educational context (Malinen et al., 2013). In addition to being short (18 items in the abbreviated version), the scale complies with Bandura's recommendation to phrase efficacy items as 'I can' and 'I am able,' and items speak to very concrete aspects of teaching (e.g., *'I am able to provide an alternate explanation or example when students are confused*'). Finally, as noted for the research context (see section 1.3 in this chapter), educators in South Africa work under challenging circumstances, and count children with disabilities among their learners; gauging their confidence with managing disruptive or challenging behaviour was deemed relevant for the study. These merits taken together, the TEIP scale was

chosen as a measure of teaching efficacy (see also piloting section 1.5.3 in this chapter). The TEIP scale was piloted with TREE mentors and the local research team as contextual experts, and with another cohort of training participants as respondents. This led to several changes, since the original TEIP scale has several duplicate items. For the domain of classroom management, three out of six items referred to disruptive behaviour, and so one was dropped ('I can control disruptive behaviour in the classroom'). For the domain of collaborating with others, two items referred to collaborating with other professionals. These items were combined and rephrased to better fit the context ('I can collaborate with other professionals e.g., social workers to help children with disabilities') and one item, which referred to laws and policies on child disability, was dropped. Reference to *students with disabilities* was replaced with *learners*, except for the one item listed above, and 'speech pathologist' was changed to 'social worker' to better reflect professionals that respondents were likely to meet in the present context. By recommendation of the TREE mentors, wording of items was further simplified. For instance, examples of assessment strategies included in the TEIP did not chime with the research context (e.g., 'portfolio assessment'), and the item 'I can accurately gauge student comprehension of what I have taught' was changed to 'I can accurately see if learners understand what I teach.' The final version had 15 items in total, with 5 items on each of the three domains: instruction, behaviour management and collaboration (see Appendix six).

2.5 Practitioner interviews

Interviews conducted with the eight practitioners sought to capture concerns and thoughts that informed their interactions with learners, conceptions of teaching, and perceptions of play and learning. Keeping in mind the recommendation to measure practices and beliefs at similar levels of specificity, these interviews used videos of practitioners' own classroom examples to elicit their beliefs and concerns (see section 2.3 in this chapter). For most people, watching yourself on video is a curious, if not an uncomfortable experience; this concern was addressed in the following ways: when preparing for the site visits, Sne and I practiced how to keep the conversation as natural as possible by rephrasing questions, being calm and showing kind interest. During the interviews, Sne would also assure practitioners, and remind them *"...there is no right or wrong answer; we hope to learn what you were thinking in that moment, whatever those thoughts were."* (see Appendix seven). Towards the

end of a classroom visit, Sne would choose a quiet corner for the interview, and then use the tablet to show videos recorded on that same day. The interviews had three sections, each using a concrete eliciting method. During the first site visit, these were: A) video-stimulated recall (VSR), B) comparing adult role in play and adult-led activities, and C) three examples of child activities (see *interview protocol A* in Appendix seven). These interviews showed that practitioners were less familiar with reflecting on their differing roles in practice. Also, children engaged in different kinds of play activities from one classroom to the next; hence, practitioners were describing diverse instances of child play, rather than judging similar activities. At the second visit and revisit, a card sorting game was used instead for section C (see below). Finally, a few changes were introduced to the later protocols. As a way to ease practitioners into considering their own practice, Sne now asked warm-up questions before showing the first video. Since the revisits took place the following term, practitioners also taught a new group of learners; this was addressed through a number of questions in the revised protocol (see Appendix eight).

When rounding off the interview, Sne asked two questions addressing the validity of responses and practices recorded (Meijer, Verloop, & Beijaard, 2002): If the camera was distracting to her and the learners, and whether she was able to relive what she thought and felt while teaching. At visit 1, several reported feeling unsettled by the camera; two mentioned noticing classroom events for the first time, for example Thembi: *"I didn't see all of this happening while we were learning. But I have that they are doing all of this because they not familiar with this. And seeing a stranger, it distracts them."* (Thembi, interview visit 1). One practitioner noted feeling a bit unsettled but fine; another felt uncomfortable watching herself make mistakes. Overall, however, practitioners felt able to carry on despite the camera, and relive what they thought and felt while teaching. By visit two, practitioners had grown more accustomed to having Sne present with a camera; three reported feeling a little insecure but all felt able to relive their teaching experiences. The final dataset included fifteen interviews.

2.5.1 Video-stimulated recall interview (Section A)

Video-stimulated recall is a technique designed to elicit practitioners' decision-making during teaching through viewing videos of their own practice (Nind, Kilburn, & Wiles, 2015; Cheng, 2010; Meijer et al., 2002). In interview Section A, practitioners viewed

the first ten minutes of the adult-led and then the play activities. While watching, they were prompted to share what they thought and felt while teaching. On occasion, they would get absorbed while watching and forget to voice their in-the-moment thinking. Hence, Sne and I agreed that if a practitioner watched for longer than two minutes or so without commenting, she would prompt again to keep the interview flowing.

2.5.2 Comparing adult role in play and adult-led activities (Section B)

In the interview's second part, practitioners were asked to describe their teaching role in the adult-led and play activities, and whether they considered their role to be different. This part proved a little tricky, since the word 'role' can translate to 'duty' or to a form of play acting in IsiZulu, rather than professional practice. By way of referring to practitioners' and children's actions in either video, Sne was able to elicit how they saw their own role as teachers in the play and adult-led activities.

2.5.3 Three examples of child activities (Section C, visit 1)

At the first round of interviews, section C elicited practitioners' notions about play. Before the interviews, Sne prepared by selecting three short clips of children playing from the classroom videos recorded that day. Watching these clips, practitioners were asked to describe what happened using their own words and give their opinion on how much the activity was a form of play and learning, and why. By speaking to specific play activities, these questions sought to emulate the perceptions section in the questionnaire.

2.5.4 Card sorting game (Section C, visit 2 and revisit)

This technique was used in the eight classroom visits taking place in the fall of 2016, and in the five visits in March the following year. It involves using four sets of 18 cards as prompts to elicit the interviewees perceptions of play and learning. The full card deck shows 36 different activities children might do, such as doing a puzzle, watching TV, using hula hoops, packing a school bag with a parent, brushing teeth or playing dress-up. In some cards, children are alone and in others they engage with peers or with an adult; likewise, children smile in some cards, and have neutral faces in others. These aspects were underlying variables tested in a cross-cultural study, where colleagues Jill Popp and Marie Bjerre Odgaard were collaborators (Shirilla, April 2018), and which was in progress during my own doctoral research.

Figure 11: Illustration showing six cards from the sorting game

In rounds one and two of the sorting game, the practitioners sorted all cards into those activities they viewed as play and not play, respectively. They also indicated two cards as representing least play, and two cards that best represented play to them. In the second round, this approach was repeated with practitioners sorting activities into learning and not learning (see Appendix eight). Using this sorting game to elicit play and learning perceptions meant all eight interviewees considered similar activities children might do, while also being prompted for their justifications when choosing cards.

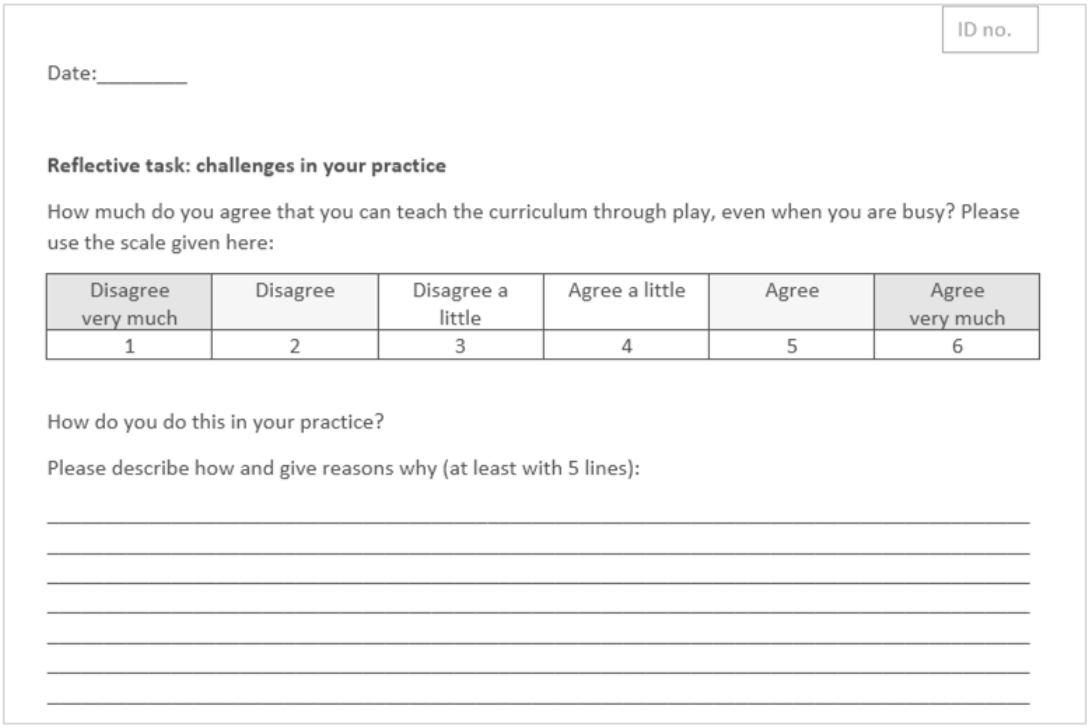
2.5.5 Interview transcriptions and translation

All audio recordings of interviews were first transcribed in the original language, IsiZulu, and then translated into English by the research assistant, Sne. To quality check translations, two IsiZulu transcriptions were sent to a second translator, who worked as a research assistant at University of Kwa-Zulu Natal and was proficient in both English and IsiZulu. Reviewing the two sets of English translations, I noted some differences in language formality (i.e., Sne tended to use more casual words than the second translator), but very few differences emerged for the substance of interviews.

2.6 Reflective task on teaching efficacy

Complementing the questionnaire items on teaching efficacy, a second method was used to capture how confident the South African educators felt about their ability to teach the curriculum through play, and how this efficacy level changed over time. This task was inspired by a similar idea noted by Ohlhausen (1992). Figure 12 illustrates this reflective task with text written in English:

Figure 12: Reflective task design



ID no.

Date:_____

Reflective task: challenges in your practice

How much do you agree that you can teach the curriculum through play, even when you are busy? Please use the scale given here:

Disagree very much	Disagree	Disagree a little	Agree a little	Agree	Agree very much
1	2	3	4	5	6

How do you do this in your practice?

Please describe how and give reasons why (at least with 5 lines):

_____
_____
_____
_____
_____
_____
_____

In many ways, facilitating children's learning in play contexts differs from more direct forms of teaching and instructing; rather than planning activities with goals and steps set in advance, educators need balance following young children's interest and explorations in play on the one hand, and intentionally guiding their endeavours on the other (Weisberg et al., 2013). In practice, this could mean designing play activities within a curricular frame, such as creating stories (Cavanaugh, Clemence, Teale, Rule, & Montgomery, 2017), or inspiring children's play through every day problem-solving, like writing groceries list (Colliver & Arguel, 2018). As no previous studies were found, which addressed educator efficacy for play-based practices, this simple efficacy reflective task was adapted based on Bandura's recommendations on constructing self-efficacy scales (2006). He recommends phrasing items as *can do* (rather than *will do*, which signifies intention over capability) and to add some element of challenge or impediment to success. Drawing on a typical dilemma of

play-based practices, the prompt was phrased in terms of meeting curriculum goals in play contexts and during busy teaching times (Pyle et al., 2017). On rating scales, Bandura (2006) argues for a range from 0-10 for efficacy ratings; however, the piloting had revealed issues with using very fine-grained scales with respondents, and so the questionnaire scale of 1-6 was chosen for this task instead. Finally, practitioners' level of efficacy was qualified with a written response, where they gave practical examples and reasons for their rating (see Figure 12). A total of 14 written responses and 13 efficacy scores were given by practitioners on this task.

2.7 Classroom observations

The daily programme used in Grade R classrooms typically includes periods of free play (choice time) where children have some choice in their play, for example which area they want to play in: the fantasy area (e.g. with dress-up clothes and child-sized kitchen sets), creative area (e.g. coloured pens and crayons arranged on a low table), the block area (e.g., with painted wooden blocks in different sizes), and reading corner (e.g., bookcase and space for reading). Another common programme feature is ring time where practitioners lead discussions around that day's theme (e.g. 'My family' or 'Going to school'). Videos of one ring time and one choice time activity were recorded to capture roles educators assumed during play activities, and styles of interacting with learners. Describing the procedure in brief, Sne would call each practitioner to arrange a suitable date. On the day of the visit, she arrived before the first lesson of the day, reiterated the purpose of the visit and confirmed consent. Next, the practitioner was asked to identify two activities in their daily programme: one adult-led activity (ring time) and one play activity (choice time). All videos were recorded on a tablet. For adult-led activities, recording started the moment children sat down and the practitioner introduced the activity. Recordings of play activities started approximately two minutes after the practitioner announced the activity. For both activities, recordings lasted for 15 minutes or until the activity ended. From earlier pilot visits, this timeframe of 15 minutes fitted the length of activities in the daily programme. Using this approach, individual activity recordings lasted between 7:40 minutes and 15:12 minutes. A total of 42 videos were recorded.

2.8 Focus group interviews

The focus group interviews were designed to capture practitioners' working circumstances (Wellington, 2015), and to explore points of interest that had emerged during data collection and early analysis stages. As an example, questions were added on what constituted 'ring time' and 'choice time' activities based on the factor analysis of perception questionnaire responses (see section 1.1 in chapter four). Additional questions addressed personal factors, including how participants' saw themselves as professionals, challenges in their work and how they tackled these. A last group of questions concerned contextual factors, for example their working environment and workloads, colleagues, parents and the local community. Questions were intentionally kept broad, with a balance of prompts addressing more positive and challenging aspects of practice. In November 2016, seven of eight participants joined the two focus group interviews (Lihle was not able to attend). One session was held in City A with four practitioners and one in City B with three participants. At the City A session, another practitioner joined her colleagues; though she was not part of the smaller study group, she did attend the support programme and was part of the larger group of respondents. Rather than turning this practitioner away, after her effort to join the session, Sne let her participate and confirmed her consent that statements given at the focus group interview would be part of the study.

Both focus group interviews were moderated by Sne and conducted in IsiZulu. In the City B session, a second member of the local research team, Jane Kvalsvig, participated as a supporter, given her previous experience with the interview format. Practitioners were welcomed by Sne and offered a chance to settle through light conversation about their trip, the weather, and chatting with fellow participants. Sne then gave a brief introduction to the interview and confirmed their consent to have the interview recorded. As a warm-up activity, she invited them to draw themselves as practitioners, enjoying a few laughs as they did so. Once finished, they explained their drawing. Next, Sne asked the group to share how each had entered the profession, and how ring and choice time activities took place in their practices; this led on to question of resources in their context – both materials and colleagues. Finally, after asking practitioners what they found most exciting and challenging about their work, Sne opened up for questions from the participants.
Before departing, practitioners' travel costs were compensated, and they were offered a warm meal. The interview protocol for the focus group interviews can be

found in Appendix nine. Later, the recorded interviews were transcribed in IsiZulu, and translated to English. As Sne was fully committed to other tasks at that point, transcriptions were done by an affiliated research assistant with the University of Kwa-Zulu Natal, who was fluent in both languages.

3. Analysis of questionnaire responses

This section is concerned with approaches used to analyse questionnaire responses on play and learning perceptions (RQ 1.1), and practitioners' sense of teaching efficacy at the start of the programme (i.e., *initial efficacy*, RQ 1.3). The approach taken to identify perception profiles among participants is described first, including Exploratory Factor Analyses of perception items and the subsequent Cluster Analysis. The section on analysis of teaching efficacy items explains the process, which led from preliminary analyses to the decision to use one combined efficacy scale, rather than determining practitioner efficacy for separate teaching domains.

3.1 Exploratory factor analysis of perception items

Exploratory factor analysis (EFA) was used to identify underlying factor scales in responses on practitioners' perceptions of play and learning. In the original study by Fisher and colleagues, Principal Components Analysis (PCA), with varimax and oblique rotations, was used (2008, p. 309). With large sample sizes, PCA and factor analysis have been found to achieve similar results, however, this is not the case for smaller samples; further to this point, assumptions for the two techniques differ (Osborne & Costello, 2005). The aim of factor analysis is to reveal underlying 'latent variables that cause manifest variables to covary' and so only shared variance appears from this analysis; PCA, on the other hand, does not discriminate between shared and unique variance – this brings along a risk of producing inflated values of variance (Osborne & Costello, 2005, p. 133; Kline, 1994). Principal Axis Factoring was chosen for the study, given the small sample and skewed data (Beavers et al., 2013). An important assumption of the exploratory factor analysis is that 'measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable' (Yong & Pearce, 2013, p. 81-82). Six respondents had rated whole questionnaire sections using one number (i.e., rated all activities in section B as 6 for 'definitely play').

In order to identify factors, sections with no variance were dropped and recoded as missing data. Based on the literature, a ratio of 10 respondents per variable was adopted (Osborne & Costello, 2005; Yong & Pearce, 2013).

Table 8: Correlation matrix for perception items

Item no.	2	4	9	12	17	18
2 *building blocks*	-	.384*	.142	.114	.210	.196
4 *empty cardboard boxes*	.384*	-	.229	.279	.150	.169
9 *flashcards*	.142	.229	-	.482*	.419*	.360*
12 *singing and dancing*	.114	.279	.482*	-	.475*	.470*
17 *making music*	.210	.150	.419*	.475*	-	.473*
18 *retelling a story*	.196	.169	.360*	.470*	.473*	-

Items were retained if correlating at .3 or above with at least 1 other item and falling above .5 in the anti-image matrices (Field, 2013, p. 694). Given these criteria, 11 items were retained. Factor cross-loadings above .3 (Yong & Pearce, 2013) and 'bloated specifics' or highly loading individual variables (Boyle, 1991 in De Winter et al., 2009) emerging in the pattern matrix were used as the final exclusion criteria. Table 8 shows correlations for the six items retained. The questionnaire tapped psychological constructs, i.e. perceptions, and so factors were assumed to be correlated (Field, 2013, p. 680). Hence, oblique rotation (direct oblimin) was used as the rotation method. Factors were retained based on these criteria: 1) each factor should explain at least 10% of the variance in the data, 2) retained factors had eigenvalues above 1 with significant factor loadings at .35 or higher, 3) internal consistency for each factor was adequate and 4) the factors could be defined conceptually by the content of their items (Field, 2013).

3.2 Cluster analysis – perceptions of play and learning

After the factor analysis, the next step was to identify perception profiles among respondents. Cluster analysis is a technique used to uncover groups from data, which has not previously been classified (Landau & Everitt, 2004). Four variables were generated to distinguish groups (N = 85) based on their conceptualisations of play and learning using mean scores for respondents' play ratings and ratings of the academic learning value of ring time and choice time activities (see variables in Table 9 and exploratory factor analysis results in chapter four, section 1.1). With these four variables, a hierarchical procedure (Ward's method) determined the potential number

of clusters for this sample. In hierarchical procedures, each participant is initially considered a separate cluster, and then systematically linked with similar participants to form larger groups (Landau & Everitt, 2004). Results are typically represented as a dendrogram, which in this case revealed 2 clusters (see Figure 13).

As seen in the dendrogram, the preliminary analysis suggested a two-cluster solution: one group showed a clear structure with few sub-branches; a second group had a more complex structure, though the main distinction with two clusters was clear. Next, the whole sample was sorted into two clusters using a non-hierarchical clustering technique called the K-means procedure (Landau & Everitt, 2004, pp. 308-9). With this method, the clustering process is reversed by stipulating the number of clusters beforehand; individual cases are moved into other groups, if they resemble this group mean more closely. After each move, the group means are updated. The procedure continues until the best fit has been achieved for all cases, and so the technique strives to minimize variability within each group and maximize variability between clusters (Landau & Everitt, 2004, p. 309). Initial cluster centres are found in Table 9, the iteration history in Table 10 and final cluster centres in Table 11.

As part of the K-means procedure, each practitioner case is assigned to the cluster with the best fit. A final step to confirm cluster distinctions as meaningful involves comparing means for the group. In preparation for this analysis, the four target variables (see Table 8) were first tested for normality, a central assumption of common, parametric significance tests. Since the frequency distribution for all four variables was non-normal, a non-parametric test was used (Field, 2013, p.175). Final clusters for the full group and the eight practitioners, as well as significance of cluster members and correlations are reported in chapter four (sections 1.2 to 1.3).

Figure 13: Dendrogram using Ward linkage

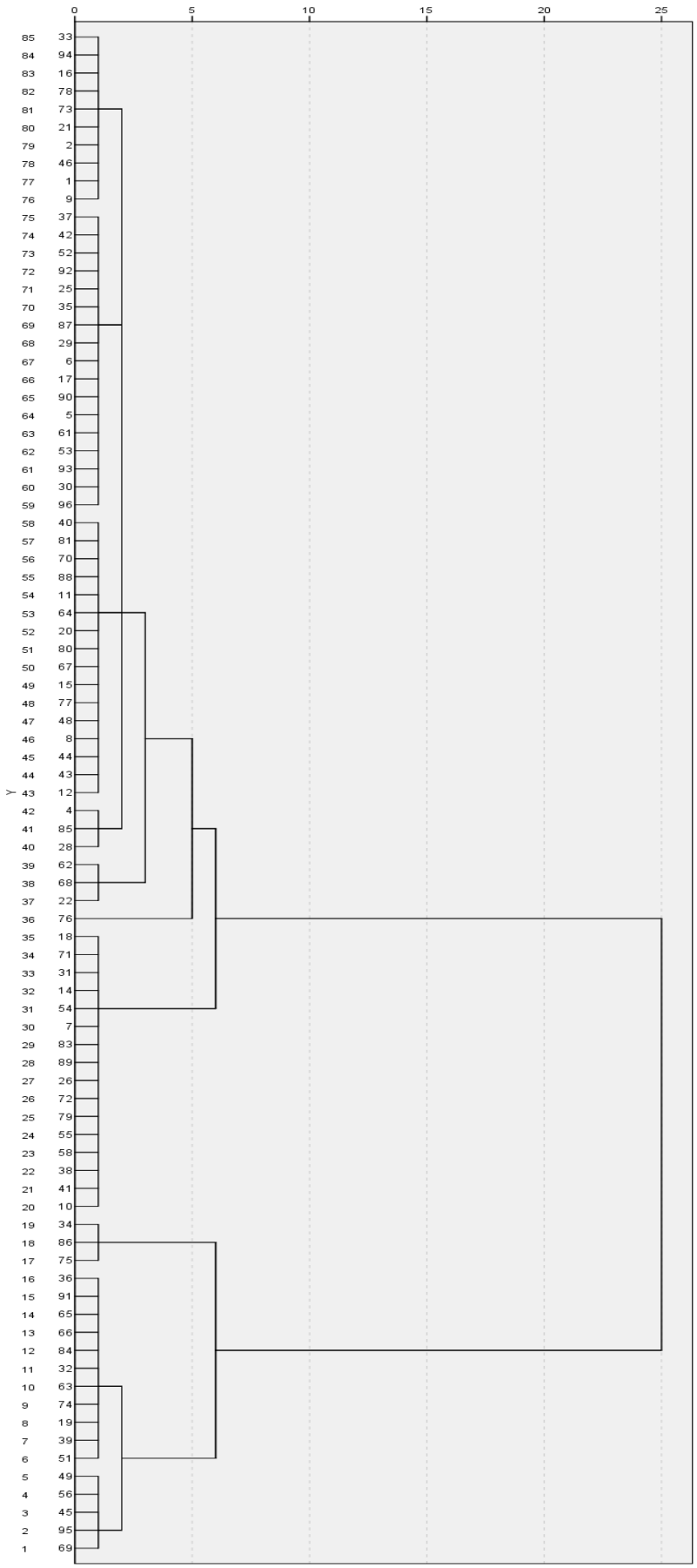


Table 9: Initial cluster centres (K-means procedure)

Variables	Clusters	
	1	2
Ring time (F1) – play rating	1.00	5.50
Ring time (F1) – academic learning rating	6.00	5.00
Choice time (F2) – play rating	6.00	1.50
Choice time (F2) – academic learning rating	6.00	1.00

Table 10: Iteration history (K-means procedure)

Iteration	Clusters	
	1	2
1	4.370	3.519
2	.129	.419
3	.062	.225
4	.000	.000

Table 11: Final cluster centres (K-means procedure)

Variables	Clusters	
	1	**2**
Ring time (F1) – play rating	5.38	4.55
Ring time (F1) – academic learning rating	5.48	4.72
Choice time (F2) – play rating	5.48	3.89
Choice time (F2) – academic learning rating	5.32	3.32

3.3 Estimating teacher self-efficacy scores

Preliminary analyses were carried out with the teaching efficacy data to determine suitability for exploratory factor analysis. These followed the same procedure used for perception items, with a ratio of 1 variable per 10 respondents as a guide, and inter-item correlations of .3 as a minimum inclusion criteria (Osborne & Costello, 2005; Yong & Pearce, 2013). With data from 86 responses included in the analysis, the number of items to be retained was 8 or lower. This process of preparing and assessing the efficacy data presented a mixed picture. Even after excluding efficacy items based on low correlations, and 8 items remained, correlations were still low to moderate (see Table 12). One reason for this low item variance could be the small,

homogenous sample in this study: Participants shared their cultural background and worked in similar contexts (see participant section 1.4 in this chapter). When analysing responses from less than 300 participants, the literature on exploratory factor analysis finds that estimating the correct number of factors requires high variance, signifying a clear factor structure (de Winter et al., 2009).

Table 12: Correlation matrix for efficacy items

	A1	A3	A4	A7	A9	A10	A12
A1	1						
A3	.262	1					
A4	.134	.287	1				
A7	.110	.280	.433*	1			
A9	.263	.109	.307*	.202	1		
A10	-.065	.271	.313*	.127	.192	1	
A12	.290	.058	.276	.174	.320*	.026	1
A14	.043	.263	.362*	.499*	.283	.249	.026

Low variance can obscure factors that do in fact exist (Fabrigar et al., 1999). Another reason could be the nature of the efficacy construct itself. In the literature, teaching efficacy is considered a multi-faceted construct, meaning that educators' level of personal efficacy can differ by teaching domain (Kleinsasser, 2014; Bandura, 2001). Studies have found that responses from novice educators, who are less familiar with reflecting on different domains of practice, tend to yield one factor, rather than the typical three-factor structure (Park, Dimitrov, Das, & Gichuru, 2016; Duffin, French & Patrick, 2012). When Park and colleagues (2016) asked undergraduate students enrolled in early childhood degree course to respond to the TEIP scale, they found one dominating general dimension and three latent factors speaking to instruction, behaviour management and collaboration with other professionals on including students with disabilities (i.e., the original focus of the TEIP scale).

In this study, practitioners were not novices, but their interviews did suggest less familiarity with reflecting on different aspects of teaching practice (see section 4.1.1 in this chapter). This coincided with insights from the piloting of the efficacy questionnaire. Here, six of fourteen items had asked specifically about Six Bricks activities and so referred to a very concrete practice context. For these responses, a three-factor structure had occurred, and more strongly for pre-training responses

(see section 1.5.3 in this chapter). By comparison, the present efficacy items tapped instruction, management and collaboration without reference to one specific activity or tool, and so some practitioners may have responded in more general terms. The purpose of analysing efficacy items in this study was not to distinguish between domains of teaching efficacy per se, but to estimate how they rated their capability to teach learners at programme start. As such, extracting domain-specific factors was not a priority. An alternative strategy was adopted where the 8 retained efficacy items were considered one scale, and Cronbach's alpha was used to optimise the scale until maximum reliability was achieved. Then each participants' teaching efficacy score was calculated by averaging scores across items on this scale.

4. Analysis of interview and reflective task responses

This section addresses analysis approaches used with data from interviews conducted with the eight focal participants, and their reflective tasks responses. The focus was on identifying practitioners' educational beliefs, including their perceptions of play and learning (RQ 1.1), and conceptions of teaching (RQ 1.2). These belief domains formed an integral part of the change model, representing both practitioners' starting point and the extent to which their beliefs about play, learning and teaching changed over time. The two mechanisms proposed by the CAMCC are also covered in this section: teaching efficacy for play-based practices (RQ 1.3) and reflective orientation (RQ 1.4).

4.1 Educational beliefs about play, learning and teaching

With the analysis on participants' educational beliefs, the purpose was to reveal beliefs held by the eight practitioners on play, learning and teaching, and how these changed over time (RQ 1.1-2). The literature review located some South African and African research on educator beliefs on play, learning and teaching, but not an extensive body of work. For this reason, thematic analysis (Braun & Clarke, 2012, 2006) was chosen for the interview data with an open approach to coding that would allow culturally specific aspects of practitioners' beliefs to emerge. As regards changes seen for each practitioner over time, it is important to note that thematic analysis serves to identify 'patterns of meaning across a dataset' rather than unique features of individual respondents (Braun & Clarke, 2012, p. 37). Accordingly, I first used thematic analysis to define the scope or landscape of beliefs *across the group*, before identifying each practitioner's unique profile. Following Braun and Clarke

recommendations (2012; 2006), the interview analysis consisted of these phases: becoming familiar with the data, generating initial codes, searching for themes, reviewing potential themes, and defining and naming themes. Data from fifteen interviews were included in this analysis (one interview was missing from visit 2).

4.1.1 Becoming familiar with the interview data

Unlike semi-structured interviews, which typically feature direct questions on concepts of interests, the stimulated recall interviews resulted in more indirect data: Often, interviewees referred to classroom events as these unfolded, what they noticed children do (mostly at the time but also at the moment of reviewing the video) and how they interpreted these actions: *"She went to see how's the weather outside today? There's nothing that can stall her. I then saw that she is taking long time. That's why I decided to go check her."* (Thembi, interview visit 1). They also relayed own thoughts, feelings, doubts, and intentions while teaching: *"I felt like, what I am doing is right - to teach them about the importance of water and what water does, that water is important even though we didn't get to mention that exactly but knowing, maybe, they have to know about water."* (Lisa, interview visit 1). Occasionally, practitioners made note of reactions to watching themselves on video (see section 2.5.1 in this chapter).

A few practitioner responses were markedly different from the group. In part of the first interview, Anele retold the fairy tale she had shared with her learners that day: *"The rabbit is getting out of the pot and granny is going in. I feel nice because they are switching position now; granny is going to go in and the rabbit is getting out. They are shaking, shake, shake, for the sake of shaking off all the water [off] the rabbit. And now it is granny's turn to go into the pot and they set the fire again. The fire that children shouldn't go near."* (Anele, interview visit 1). In a very literal sense, she was adhering to the interview prompt of reliving what she thought and felt while teaching, though later, in her second interview, Anele's responses resembled those of her peers: "*I thought 'let me ask children if they heard what I was teaching.' By asking questions, to see if they did pick up something from today's lesson."* (Anele, interview visit 2). Another practitioner repeatedly shared what she worried children might do (see section 4.3 in this chapter). The indirect data from the first part of the interviews stood in contrast to responses given in the remaining sections. In section B, on eliciting teaching conceptions, practitioners were asked to compare teaching roles

across the two videos. For some, this was an unfamiliar exercise, and as they really wanted to understand the question, this turned into longer interchanges. Those statements, where the practitioners articulated how they understood their roles while engaging with children in the first and second video, were put aside during the search for themes, and used later when reviewing patterns on teaching roles. Interview section C prompted directly for practitioners' beliefs about play and learning; first, this was done by showing three short clips with children playing from the video recorded on that day, and later through the sorting game with cards (see section 2.5 in this chapter). In interviews featuring clips of children playing (visit 1), practitioners were first asked to describe what they saw; their responses ranged from long descriptions to brief sentences: *"This one is pretending to be a mother, playing with a doll. The child is crying."* (Fikile, interview visit 1). Based on their descriptions of children's activities, practitioners then considered how much this was form of play and a form of learning. Invariably, activities were rated as definitely play and learning, and so most nuance in their responses was captured in the descriptions themselves. These were included in the thematic analysis.

In the sorting game (used at visit 2 and the revisit), practitioners chose cards that represented most and least play, and most and least learning, in their opinion. This way, the sorting game with cards yielded valuable justifications, just as similarities and nuances in practitioners' choices could more easily be discerned. Taken together, the interview data reflected teaching as multi-facetted, fluid and constantly evolving practice: in the moment of teaching and interacting with children, respondents were partly informed by plans prepared and goals they had set, partly by how they read the situation, children's responses and what opportunities they noticed, partly by their own state of mind, and, as we saw earlier in the section of data collection (Methodology section 2.5), partly by the presence of a stranger. Given this combination of descriptions of practice and answers to more direct questions on teacher roles and play and learning perceptions, I adopted a systematic approach to sifting through the data, which is described next.

4.1.2 Generating initial codes

The systematic approach involved two steps of initial coding: sorting the interview data, followed by reviewing and note-taking of each compilation. The first sorting round ensured that each statement was considered from several angles relevant to

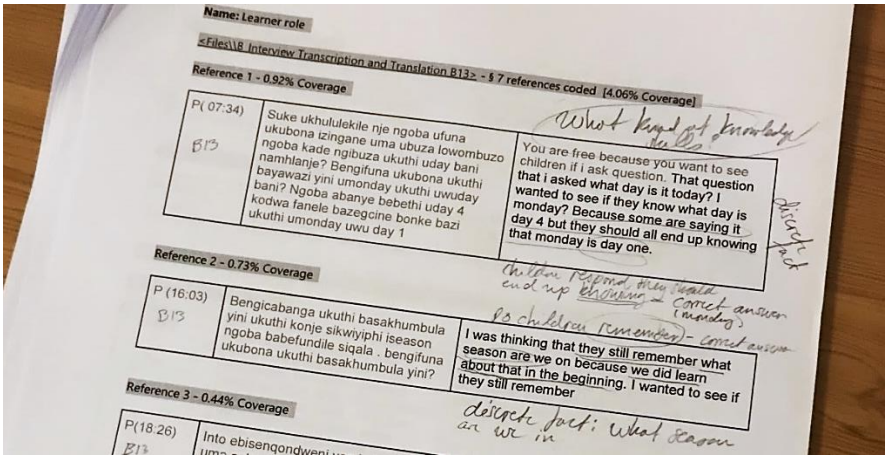
teaching as an enactment of beliefs (see Table 13). Initial codes for this step were deliberately kept broad to accommodate nuances in the eight practitioners' educational beliefs. For play perceptions, previous research suggested that these vary widely across cultures (Marfo & Biersteker, 2011), but also within groups of teaching professionals from the same cultural context (Aronstam & Braund, 2015; Cheng, 2012). Play perceptions reflect what practitioners consider the nature or essence of play, and so I included any statements where practitioners referred to children's play. 'Learning perceptions' cover what and how children should learn, what they are learning in a given moment and how they came to learn something. In a similar study of educational beliefs underpinning teachers' enactment of a novel approach, the researchers noted that key differences emerged from respondents' learning objectives, as in what purpose or intention they assigned to an activity, and in their appraisal of children's learning (Marshall & Drummond, 2006). Both were included as initial codes. For teaching conceptions, studies find that some educators tend to emphasise their own role, while their students rarely feature in teaching situations; others describe their teaching practices with a starting point in their students' work (Rusznyak & Walton, 2014; Patchen & Crawford, 2011). Considering this positioning of practitioners and their learners seemed key to understanding their conception of teaching; hence, practitioner and learner roles were added to the initial codes. Table 13 lists codes used to sort statements into six compilations.

Table 13: Initial codes used to sort interview statements

Perceptions of play and learning
Play perceptions. Statements describing what play is like (but not purpose, which falls under the code 'Activity purpose').
Activity purpose (learning value). Statements referring to the purpose or intention of an activity, including the learning value / purpose of play activities.
Appraisal. Statements assessing what children have learned (ability / knowledge), or not been able to learn (expectations not met).
Teaching conceptions
Practitioner role. Statements describing the practitioner role or actions; may mention learners, but their role is not described.
Learner role. Statements describing the learner role or actions; both actual (descriptive) and what they should do (normative).
Practitioner-learner relation. Statements describing both learner and practitioner roles or actions in the same unit.

In the second step, I reviewed each compilation of statements separately and in detail, making notes underway on possible codes and interpretations (see Figure 14). Through these two steps, all interview statements were coded and categorised; at this point, clarifying questions and short, ambiguous sentences were excluded from the analysis. Codes and categories used in the analysis were not mutually exclusive but looked for connections and contrasts across the dataset (Wellington, 2015; Braun & Clarke, 2012; 2006).

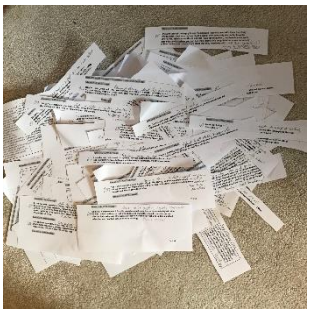
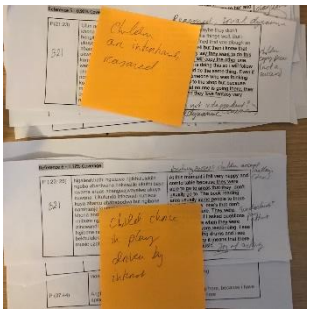
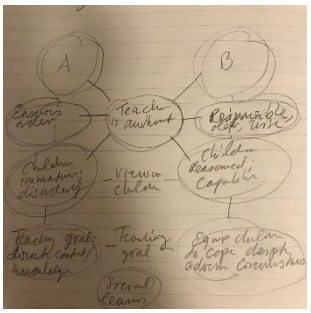
Figure 14: Picture showing compilation of 'learner role' statements with notes



4.1.3 Searching for themes

After reviewing each compilation, I began to search for themes speaking to each group of statements: play and learning perceptions, activity purpose, practitioner and learner roles, and their mutual relation. This allowed for the analysis to focus on different angles of the teaching situation. As shown in Figure 15, the process of theme searching involved sorting codes in a compilation based on similarities, labelling groups and noting how these pointed to overarching patterns. Compilations were addressed in this order: learner role, practitioner role, relations, play perceptions, and finally, learning perceptions.

Figure 15: Pictures showing process of searching for themes

Cutting and sorting	Grouping similar codes	Making connections
		

Through this process, patterns emerged, which cut across the initial codes. For example, some practitioners underscored the importance of being at children's level and having a positive sense of mutuality with learners; this spoke both to how they related to learners, and how they viewed learner and practitioner roles. Statements recounting successful instances of teaching, included signs that learning goals were met, but also that children were attentive and listening. Another group of statements spoke of roles and practices that were specific to play activities during choice time.

4.1.4 Reviewing potential themes

The process of categorising each compilation of statements, adding new interview data extracts to existing codes, creating new and adjusting codes, eventually yielded several potential themes. For each iteration, these gradually grew more nuanced until most themes consisted of 3-5 codes; one exception was a theme under learning perceptions. When reviewing these overarching themes, all data extracts were re-read and coded (Braun & Clarke, 2012; 2006). Seven statements were excluded, which made passing references to children's home context (i.e., learning to count at home) or physical well-being (i.e., checking if children were hungry) as factors influencing child learning in class. Since the statements were few, and did not occur across the group, they were omitted. As a final step, the resulting themes were contrasted with other data sources, namely teaching roles articulated when practitioners compared the two classroom videos, and with the cards chosen as most and least play, most and least learning, by each practitioner. For instance, when practitioners justified card choices representing learning least, they highlighted learning as different from routine activities – walking, tying shoelaces, or waiting.

Hence, justifications added insights to the theme on learning perceptions, although explanations for card choices were brief compared to reflections on own classroom practices (i.e., Anele: *'They are just standing in a queue and waiting for instructions on what to do.'*). This was similar for perceptions of play, where some conflicting notions surfaced. Early in the sorting game, Thembi stated that to her, all cards represented learning; and yet, when choosing the card she saw as most representing play, an adult and child playing with hula hoops, she justified her choice by contrasting learning and play: *"It is because here, there is nothing that I can say they are learning, it is made for playing only."* This indicated that practitioners held some contradictory beliefs. Again, statements elicited through video-stimulated recall offered richer insights. Based on the final themes, individual profiles on play and learning perceptions were extracted (see chapter four, section 4).

4.2 Practitioners' sense of teaching efficacy (RQ 1.3)

The first change mechanism in the CAMCC is practitioners' sense of efficacy. Both efficacy for teaching overall and for using a new approach in practice, were captured in this study. Teaching efficacy was addressed with the questionnaire (see section 3.3 in this chapter). The reflective task focused on their judgement of capability to use play-based approaches. When analysing reflective task responses, the purpose was to determine reasons that underpinned each practitioners' level of efficacy for teaching the curriculum through play and over time. The task was given twice: in May to June (time one) and in September (time two). Reflective task data included 13 efficacy scores and 14 written responses. Maude did not respond to the first reflective task and gave a written response, but not an efficacy score, to the second reflective task. Anele's first response and score were likewise missing. The qualitative analysis of responses consisted of two coding cycles (Miles, Huberman, & Saldana, 2014). The first cycle focused on becoming familiar with and condensing the data through note-taking and coding. In the second cycle, emerging codes were refined and grouped into patterns of main reasons for efficacy scores. As a final step, efficacy scores and reasons were compared for each practitioner.

4.2.1 First cycle: reasons for efficacy to teach through play

In this cycle, I began by reading and re-reading responses, noting initial codes underway. To give a sense of the data, responses were typically brief (5-6 lines of text written on the task sheet), and in the first task, practitioners mostly combined

general statements about professional norms with descriptive examples of concrete teaching strategies or play as a learning context. In her first response, Martha gave the efficacy score of 6 (*'Agree very much'*) followed by this justification: *"I give myself time to do my work, I use the daily programme. Because I love my work, because children need to be taken care of all the time. Because children need to learn. I use different things so children can be interested in playing and learning. I give them love so they can be comfortable."* In the second task, practitioners also named issues and qualified what 'busy' meant to them – for instance, having to fill out forms while keeping children busy or children fighting over toys.

After reading the responses, I used a holistic coding method to organise and condense the data; this involved applying one code to capture a sense of the overall content and possible categories in a larger data unit (Miles, Huberman, & Saldana, 2014, p. 77). Continuing with Martha's excerpt to illustrate this process, the first part her response – *'I give myself time (…) Because children need to learn.'* – was initially coded as 'professional norm' with 'dedication' as the main reason. The next two sentences referred to concrete strategies that informed Martha's self-efficacy and both centred on motivating children: providing interesting materials and giving affection. Summing up the initial condensing of Martha's response, her high efficacy score in the first task was informed by a professional *dedication* (love of her work and the children) together with her ability to motivate children in play.

4.2.2 Second cycle: patterns in reasons and efficacy shifts

In this second cycle, initial codes were compared across all responses and refined. Staying with Martha's excerpt to illustrate the process, *dedication* was merged with similar codes; this group was then re-named *vocation* to capture the sense of professional commitment, which was shared by its codes. I also reviewed codes for teaching practices, which each practitioner associated with 'teaching the curriculum through play.' Finally, main reasons for each practitioner were held against changes in their efficacy levels between the first and second reflective task.

4.3 Reflective orientations

The next research question concerned practitioner reflection on the programme message of children learning through play. In the CAMCC, reflection is assumed to act as a second mediator of practitioners' attitude change. Gregoire (2003) draws on

dual-processing theory to distinguish between a systematic or *deeper* reflective approach and a heuristic or more *surface-level* approach to reflection (see Evans, 2008). Deeper reflection is thought to raise the likelihood of change taking place, as practitioners expend more effort to consider key aspects of a novel approach, including how to apply it in their classroom and how to improve their application (Gregoire, 2003, p. 164). In preparation for this analysis, I first consulted research applying the CAMCC, with a view to build on existing work. One empirical study turned up, where Gregoire Gill and colleagues tested systematic processing and student teachers' prior epistemic beliefs as change mechanisms (2004).

The researchers used a thought-listing task, where students spent three minutes noting ideas, attitudes and thoughts after reading a text about mathematics teaching and learning – either a refutational text that challenged their beliefs, or a non-refutational text (Gill, Ashton, & Algina, 2004). However, finding no straightforward relation between changes in beliefs and participants' processing, as measured in their study, the authors called for alternative approaches in future research (2004). Looking further, I discovered a group of researchers, who had investigated patterns of learning among pre- and in-service educators, and noted similar distinctions of deeper and more surface-level reflections (Vermunt & Endedijk, 2011; Mansvelder-Longayroux, Verloop & Beijaard, 2007). Inspired by their work, I developed a coding scheme to determine the eight practitioners' approach to reflecting on their practice. Two data sources were included in this analysis: responses from the first section A in all 15 interviews – this section asked practitioners to share thoughts and feelings in the moment of teaching – and 14 written justifications from the two reflective tasks.

4.3.1 Three reflective orientations

In the context of educational innovations, Vermunt and Endedijk (2011) identified three reflective orientations, when practitioners considered classroom events: a performance, meaning and more struggling approach. Taking a performance-oriented approach to reflecting means educators are concerned with how ideas might immediately be applied in classroom practices; more meaning-orientated reflections are directed at underlying reasons for why events or activities happened as they did; a struggling approach is characterised by worries, and relapsing into 'old' teaching routines (Vermunt & Endedijk, 2011, p. 297). Along similar lines, Mansvelder-Longayroux, Beijaard and Verloop (2007, pp. 54-58) analysed fragments from

reflective portfolios written by 21 student teachers; a vast majority (93% of 1778 learning activities identified) described an event, for example something that happened during a lesson (remembering) and assigned a value judgement to that event (evaluating). This combination of recalling and evaluating events mostly addressed these student teachers' immediate performance and improvement of performance, in the context of teaching practices. A deeper approach (characterised by analysing, diagnosing, critically processing and reflecting) emerged in 7% of the learning activities identified in the study.

In these cases, reflective thoughts paid attention to underlying processes that might influence teaching situations; for example, what factors played a role in a classroom event, the effect of a teaching approach, or the student's own functioning. Returning to dual-process theory (Gregoire, 2003, p. 159), performance-orientated reflections resonated with this theory's surface-level (heuristic) route with a focus on immediate performance; conversely, more meaning-orientated reflections aligned well with the deeper, more active processing route in the dual-process model. Establishing the combination of all three orientations, as they emerged in practitioners' responses, would yield a reflective profile, and point to tendencies for deeper reflections on classroom events and own teaching, a more surface approach or a blend. While dual-process theory does not consider practitioners struggling in practice (Gregoire, 2003), as represented with the final orientation, this stance is well-known from research on teachers' reflective practices (e.g., Donche, Endedijk, & van Daal, 2015; Vermunt & Endedijk, 2011; Larrivee, 2008).

4.3.2 Adapting and refining the coding scheme

Starting with the interview data, an initial coding scheme was developed, which drew on descriptions from studies on educators' reflective orientations, including learning activities (Bakkenes et al., 2010), and keywords for each orientation (Vermunt & Endedijk, 2011; Oosterheert & Vermunt, 2001). Throughout this process, I worked with Dr Pablo Torres, a fellow educational researcher with experience in coding interviews. As a first step, the two raters discussed the original codes to clarify definitions and establish a shared understanding. This led to four broad definitions:

1. Struggling-orientation is characterised by the respondent experiencing a lot of problems (friction), and attributing those problems to a lack in learners (not searching for underlying reasons and processes behind events in the classroom)

2. Performance-orientation is characterised by the respondent describing and evaluating own teaching practice, and/or learners' function / learning (but not searching for underlying reasons and processes)

3. Meaning-orientation is characterised by the respondent trying to make sense of classroom events by searching underlying for reasons and processes, without blaming learners (analysing, diagnosing, and critically considering, in addition to evaluating)

4. Description: The respondent describes classroom events without blaming or referring to a lack in learners, evaluating or searching for underlying reasons or processes to explain why an event in the classroom happened as it did

Next, we reviewed one full interview together, discussing suitable codes for each episode, and continued to refine the coding scheme. At this stage, the broad definitions had grown quite extensive and were then divided into a) a brief characterisation of the orientation (struggling, performance and meaning), and b) indicators to aide coding decisions. We then coded five interviews independently, comparing and discussing decisions to understand discrepancies and further refine codes. These iteration cycles yielded distinguishing features for each orientation. For example, the indicator 'problems are defined as external, mainly as a problem of their learners' (paraphrased from Oosterheert & Vermunt, 2001, p. 150) proved central to the struggling orientation, while 'internal attribution' for the two other orientations was not supported by the data. Similar to studies cited earlier, the combination of remembering and evaluating classroom events emerged as defining for the performance-orientation, while the indicator 'the respondent tries to make sense of classroom events by searching for underlying reasons and processes' helped to distinguish meaning-orientation. Bakkenes and colleagues (2010) described a total six learning activities, and of these, two emerged in the interview data for this study: *2. considering own practice* and *3. experiencing friction.* This was not surprising given the nature of the interviews, where respondents relived their thoughts and feelings while teaching. Hence, the coding scheme was organised into these two learning activities, with each orientation described and exemplified with interview data (coding scheme version 5, see Appendix ten).

4.3.3 Inter-rater process and final revisions

At this stage, the process shifted to establishing inter-rater agreement through calculating Cohen's *k* and making final changes to the coding scheme. Before the inter-rater process began, interviews were divided into episodes: one turn-taking, where a practitioner responded to the interviewer's prompt, was considered one episode, and the most appropriate unit for this analysis (Strijbos, Martens, Prins, & Jochems, 2006). The coding was exhaustive with each episode coded either as one of the orientations (S, P or M), descriptive (D) or not applicable (NA). Using version five of the reflective coding scheme, we proceeded to code one interview independently; in this first round, we agreed in 44% of cases (*k* = .14 or slight agreement, Landis & Koch, 1977). When reviewing our respective codes, this low agreement came down to whether a statement complied more with performance- or meaning-orientated approach. In part, this could be attributed to the nature of the data. When using the video-stimulated recall technique, Sne would prompt practitioners further if they started to describe their practice in general terms (i.e. 'When I teach, it is important to not spoon-feed them information…'). If this occurred, she would ask '*What makes you say that?*' once, in order to give the practitioner a chance to elaborate (see Appendices seven and eight). Hence, most statements had a reflective flavour. Our task when coding was to determine if these reflections were 'deep enough' to qualify as meaning-orientated. As shown with the quotes below (Table 14), making this judgement required high levels of interpretation.

Table 14: Illustrative examples of performance- and meaning-orientated statements

Performance-orientation	Meaning-orientation
The respondent notices the friction, and evaluates own teaching performance and/or children's learning/ functioning – asking or answering: *What do I want to achieve? How well am I doing as a teacher? What should I do? What are children learning? How well are they doing? What should they do/learn?*	The respondent notices the friction, trying to make sense of classroom events by searching for underlying reasons, explicitly considering why an activity worked as it did, children act or learn as they do, or reasons behind own actions and intentions.
I can say that I wasn't feeling great, actually, because I was caught off guard. Because we were not doing anything with the children in the past days. I would give them papers to write on only because most learners are not coming to school. I wanted all of us to start the new lesson in August (Maude, Visit 1 interview, 02:32)	*(...) I was thinking that firstly, they won't know the difference between aquatic frogs and normal frogs. But I saw that some know, because some have houses along rivers. That means they do visit rivers and see these things (...)* (Thembi, Visit 1 interview, 22:56).

In the quote featuring Maude in the left column, she talks about teaching children at end of term, where fewer learners attended her class. She had decided to keep them occupied ('I would give them papers to write on only'), rather than introducing a new theme, so that all learners could start the same lesson in August. Based on this analysis, I coded the statement as P, for performance, placing emphasis on Maude's concern for 'what do I want to achieve' and 'what learners should do' (i.e., all children being on the same page, curriculum-wise), over her underlying reasons for wanting all learners to be at the same stage (searching for reasons behind own actions, i.e. meaning-orientation). Maude really was an interesting case with respect to being subtle and her reflective orientation was hard to place. Several times in the first interview, she would consider what *might* happen, and not what *did* happen in her classroom: *'What I was thinking is, my children, since there is a stranger, it may happen [that] as I am asking them questions, or as I say they must say "myself," I was thinking maybe one of them would be scared because some do [get scared]; some, if you ask them a question, they first stare at the stranger and sit down. But today, they were able to respond to the questions, all of them. Everything that we were doing, they did it with confidence and commitment.'* (Maude, interview visit 1, 04:36). Effectively, Maude worried pre-emptively, wondering if children would hesitate with a stranger present. Since they didn't, she judged them to perform the activity of presenting 'myself' well, and nothing had actually occurred out of the ordinary in her class. During the process of refining the coding scheme, we consequently decided to prioritise statements about actual practice – what children and the practitioner did. In version 6 of the reflective coding scheme, guiding sentences were further added to help identify salient features of interview statements when deciding between the two orientations, meaning and performance (see Table 14).

We then proceeded to code two additional interviews independently, using this version of the reflective coding scheme. Table 15 shows level of agreement in percentage and Cohen's *k* for both rounds of inter-rater coding. When coding these two interviews, we agreed in 73% of cases on average before discussing (k = .49, or moderate agreement, Landis & Koch, 1977). This was a much improved but still relatively low score. Reviewing the distribution of codes, I noted that *Performance* (PO) was coded most frequently.

Table 15: Agreement (%) and Cohen's k for reflective coding

	Version 5	After discussing	Version 6
Agreement (%)	44%	100%	73%
Cohen's kappa	.14	-	.49

Finally, given the nature of the data, distinguishing between two learning activities (i.e., *Considering own practice* and *Noticing friction*) did not add either valuable information or help to establish practitioners' reflective orientation. In the 7th and final version of the reflective coding scheme, these two categories were collapsed into one category and identifier, with *Struggling (SO)*, *Performance (PO)*, *Meaning (MO)*, *Descriptive (D)* and *Not Applicable (NA)* as sub-codes (see Appendix ten).

4.3.4 Intra-coding and exclusion of ambiguous statements

Unlike in my own case, Pablo did not have knowledge of the classroom events discussed during interviews, when interpreting statements. This difference in frame of reference came out whenever we reviewed individual episodes and codes; here, our agreement was complete (see Table 15). Researchers have often found interview data to require high levels of inference and 'insider' knowledge (Spooren & Degand, 2010; Braun & Clarke, 2006). Our review of coding discrepancies, together with the moderate level of agreement (k = .49), highlighted this issue of some interview statements being ambiguous and hard to place definitively. The question was how to improve the robustness of findings from this analysis. From a reliability perspective, one ideal scenario is to have two or more raters code all interview independently (i.e., double-coding), and, for instance, calculate an average score based on their codes.

Another, and arguably less ideal option, is to aim for consistency through one rater coding the entire dataset (i.e., single-coding) (Spooren & Degand, 2010). Since this analysis should indicate practitioners' reflective approach by establishing dominant orientations (i.e., reflecting more or less deeply about their practice), and not offer a fine-grained mapping, I opted for excluding ambiguous statements. This was done by combining double- and single-coding: First, all interview statements, where Pablo and I had disagreed in the second inter-rater round, were excluded (Interview Visit 1 for Lisa and Martha). Then I coded the remaining thirteen interviews twice, allowing eight months to pass between the first and second round of coding. On both coding occasions, I used un-coded data material to minimise coder bias.

From this process, a total of 70 ambiguous statements were excluded (range 0-13 and average 4.7 statements per interview), and 276 clear statements were included (range 11-26 and average 18.4 statements per interview). With 13 statements excluded, the first interview for Martha and Maude's second interview were notably more ambiguous than those of their peers. Across codes, the most frequent discrepancies occurred for Performance and Meaning (N = 26), followed by Performance-Descriptive (N = 23) and Performance-Struggling (N = 15). Minor differences were seen for Meaning-Descriptive (N = 3), Meaning-Struggling (N = 2), and Struggling-Descriptive (N= 1). As a final step in the analysis of reflective orientations, I contrasted findings from the interview data analysis with statements given by the eight practitioners on the reflective task. In the next chapter, results are presented together with examples of statements coded as meaning-orientation, just as concerns raised in practitioners' meaning-oriented statements are summarised.

5. Analysis of classroom observations

From the classroom visits, a total of 42 videos were recorded. The first part of this analysis was concerned with how often practitioners participated actively in children's play, what roles they adopted, and learning opportunities fostered by their presence (RQ 2.1-2.2). The second part coded practitioners' styles of interacting with learners in their class, using an existing measure (ECCOM, Stipek & Byler, 2004).

5.1 Practitioner involvement and roles during play

Previous research exists, which has focused on different roles early educators take in play. For instance, Vu and colleagues (2015) used a 20-second time-sampling technique to code preschool teachers' involvement in play scenarios as either *no involvement*, *onlooker*, *stage manager*, *co-player*, *play leader*, *director* and *re-director* (Vu, Han, & Buell, 2015). When this quantitative approach was first explored in this study, most scores lumped together in a few codes, namely *stage manager* and *onlooker*, and only a few practitioners were coded for instances of *co-playing* or *play leading*. It seemed that important nuances in how the South African practitioners engaged with children were not captured by this video analysis approach. Instead, thematic analysis of the play activity videos was chosen to address these two sub-questions (Braun & Clarke, 2006; 2012). For this analysis, I worked together with a research team with the Ontario Institute for the Study of Education, University of Toronto (see Acknowledgements), who were also investigating how early educators

enacted guided play with five- and six-year-old learners (Jensen, Pyle, Alaca, & Fesseha, 2019). In both South Africa and Canada, early education policies mandate the implementation of play-based practices to support children's developmental and academic learning (South Africa, Excell 2016; Canada, Pyle & Danniels 2017). By collaborating on this thematic analysis of play activity videos, we were able to work systematically with code definitions and compare findings on guided play practices across two different cultures. In this doctoral dissertation, only data and analysis steps relevant to the South African setting are described.

5.1.1 Step one - identifying video clips

The first step was to become familiar with video data and identify video instances relevant for the analysis. Clips of interest featured adults and children interacting during play, and instances of facilitating or guiding. For this purpose, 'play' was defined as neither entirely child- nor adult-directed: the locus of control could swing between children and the adult during play, without being entirely relinquished by either. Drawing on the literature, we further reached these criteria for identifying guided play instances, specifically: a) the practitioner must be involved in the play – present and interacting with children, b) child(ren) should have some degree of choice in the play, for instance, choosing what or how to play, and c) the practitioner takes the play beyond what children have done (e.g., through scaffolding, modelling, or extending the play scenarios), but the practitioner cannot begin to direct children's actions, nor are extensions forced or contrived (Pyle & Danniels, 2017; Weisberg, Hirsh-Pasek, Golinkoff, Kittredge, & Klahr, 2016; Weisberg, Hirsh-Pasek, & Golinkoff 2013). From the South African video data, 62 specific instances of guided play were identified and included in the analysis of practitioner involvement and roles in play. These clips represented 14 out of 21 play activity videos. While viewing play activity videos, I made notes and descriptions throughout to inform the next step in the analysis (Braun & Clarke, 2012).

5.1.2 Step two - initial codes and categories

In this step, a list of descriptive codes was derived from notes made during the video viewing and from reading the literature. These initial codes included: *extending, open-ended questions, proximity to the play, supporting learners' play, social development*. The South African video data were then coded separately using these initial codes. Following this step, I clustered similar descriptive codes into initial

categories. Figures 16 and 17 illustrate this process by showing two categories and their respective code clusters: *proximity to pla*y (‘at child level,’ ‘adjacent’ and ‘apart’ are shown underneath) and *scaffold*, with seven types of scaffolding identified.

Figure 16: Example I of category and code clusters

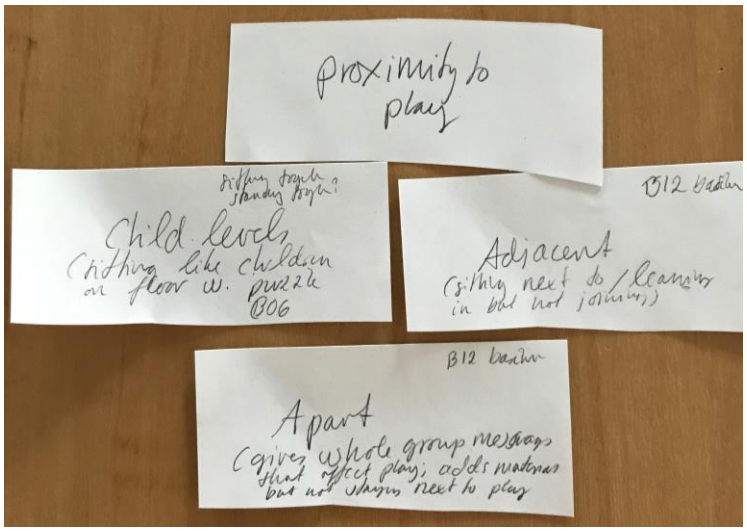
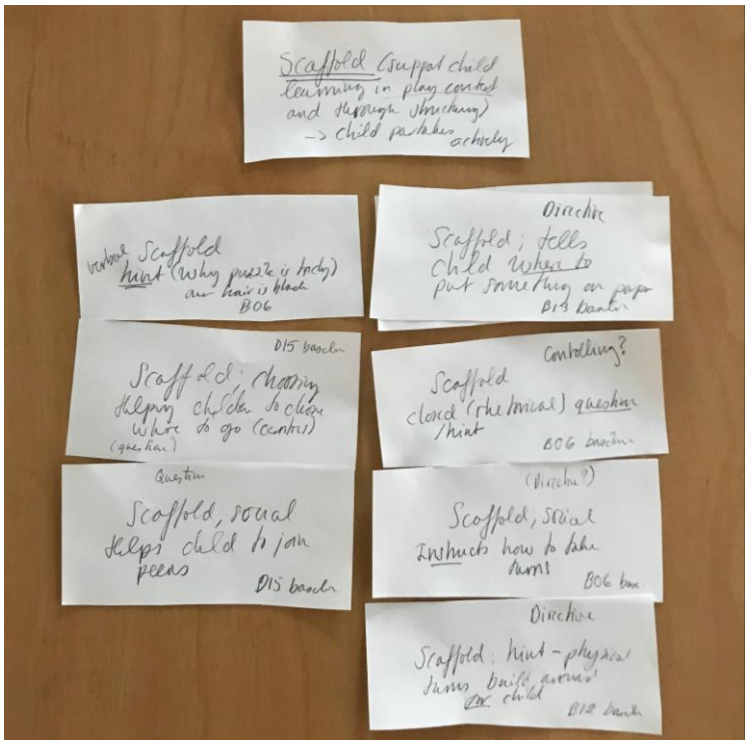


Figure 17. Example II of category and code clusters



5.1.3 Step three and four – searching for and reviewing themes

Based on recurring patterns between codes and categories, I generated initial themes for the South African video data. These were: *initiating and inspiring play*, *keeping the play going (or keeping children busy in play)*, *deepening children’s*

learning in play contexts, and *managing the classroom*. This iteration also led to several codes being omitted from the analysis. While these codes described features of practitioners' interactions with learners during play, they did not comply with our criteria for guiding or facilitating play (see section 5.1.1 above and the overview presented in Table 16). The kinds of adult-child interactions, which the omitted codes represented, were not entirely excluded from the study. Some were captured in other analyses (e.g., instances of instructing used by some practitioners fitted the directive style in the ECCOM social climate scale, see section 5.2.1). Others, such as less productive forms of facilitating play, were noted along with excerpts from video transcripts, and added under Results (see chapter five, section 1). This meant that potential strengths as well as challenges, which practitioners met when implementing guided play in their classrooms, were included in the analysis and findings. At the conclusion of step four, I reconvened with the Canadian team to compare our emerging themes for the two countries.

Table 16: Overview of codes dropped following team discussion

Presence / questioning	Scaffolding / modelling	Disciplining / motivating
Proximity - apart (practitioner gives whole group messages concerning the play)	*Scaffold - directive* (tells child where to place something)	*Intervene - scolding* (intervenes in conflict during play by telling children off)
Question (practitioner asks something, but it's inaudible)	*Scaffold - assist* (helps child with task, but child is passive)	*Dismiss - verbal / non-verbal* (disregards a child's attempt through action / words)
Question - invitation (invites children to read with books but gets no response)	*Scaffold - hint* (uses rhetorical question to guide children)	*Tone - stern* (practitioner is stern with children)
Question - contrived (inserts own learning goal by asking what colours are used in tower)	*Model - competitive* (e.g. - 'I can build a nicer house')	*Stating a norm* (tells children what how something / ought to be done)
Closed-ended question (asking e.g. whose car is this, eliciting one-word responses)	*Model - adjacent* (models play by playing alone or apart)	*Incentivising* (practitioner offers sweets for completing puzzle)
	Model - taking over (assists by taking over part or all of a task)	
	Model - instructing (directs children during play)	
	Model - invitation (reading and inviting aloud but getting no response from children)	

5.1.4 Step five - defining and naming themes

At this stage, we saw three clear themes on educator role in play emerging from the video data, and very interestingly, these resonated across both cultures: *managing*

play, *initiating play* and *extending play*. When *managing play*, practitioners were close to children during play, either next to them or sitting at their level; they helped to sustain children's existing play scenarios, supporting them to stay on-task, and assisted their interactions with peers. Although not a form of guided play, meaning that practitioners did not enrich or extend children's play context, this was a common form of play facilitation. More guided forms of play facilitation included *initiating play* and *extending children's play*. When *initiating play*, practitioners took a more active and intentional role by framing a new play activity or by introducing a new element to children's existing play scenario. Children then directed this new activity. In the final theme, *extending play*, practitioners enriched children's learning in play through modelling and scaffolding, and supported their efforts to reach specific goals (see Appendix twelve). As a final step, I recoded all the South African video data using the updated codes and noted the percentage of time practitioners were engaged in each of these three roles. These findings, together with illustrations of each theme, can be found in chapter five (section 1).

5.2 Practitioners' teaching styles

A handful of observation measures exist, which capture teaching styles educators use with children and the quality of teacher-child interactions (RQ 2.3); typically, these score classrooms on a continuum, e.g., higher to lower quality interactions (Hamre, 2014) or tending towards a more controlling or autonomy-supportive styles (Cheon, Reeve, & Moon, 2012; Cheon & Reeve, 2013). However, researchers also recognise that the evolving flow of classroom practices is rarely simple (Walsh et al., 2006), and even for widely accepted observation measures, studies continue to find only modest associations between quality indicators used in observation instruments and young children's outcomes (Burchinal, 2018). My motivation for choosing a tried and tested classroom observation measure was to capture aspects of teaching that relate to child outcomes, and to achieve practice profiles that could be compared over time, and across the eight participants. The final choice fell on the Early Childhood Classroom Observation Measure (ECCOM; Stipek & Byler, 2004).
Three main reasons informed this choice. First, this measure yields a more nuanced classroom profile based on three teaching styles: a facilitative style, directive and withdrawn style. Secondly, the ECCOM has seen previous use in classrooms with five- and six-year-old students across cultural contexts, linking practices to children's gains (Tang, Pakarinen, Lerkkanen, Kikas, Muotka, & Nurmi, 2017; Kikas, Peets, &

Hodges, 2014; Stipek & Byler, 2004). As such, the measure offers a benchmark for findings from the novel South African context. The third reason related to the measure's conceptualisation of teaching. Theoretically, the researchers who developed the ECCOM conceived of 'effective teaching' as providing both direction and guidance when assisting children in developing knowledge, while also offering opportunities for them to direct their own explorations (Stipek & Byler, 2004, p. 379). This balance of adult scaffolding and child choice resonated with the guided play approach (Zosh et al., 2018), and so the measure answered the study's purpose well.

5.2.1 Overview of the ECCOM measure

The ECCOM consists of 32 items distributed on three scales (management, social climate, and instruction) and three dimensions, which capture educator roles or styles of teaching: a *child-centred* or *facilitative style*, a *teacher-directed* or *directive style*, and a *child-dominated* or *withdrawn teaching style* (Stipek & Byler, 2004, p. 388-9). Apart from two items, which only feature under the *facilitative style* (*Teacher warmth* and *Relevance of activities to children's experience*, Stipek & Byler, 2005), all items are coded for each of the three styles. These styles are labelled A (*facilitative*), T (*directive*) and C (*withdrawn*). Each ECCOM item is rated on a scale from 1 to 5 (1 = these practices are rarely seen [0-20% of the time] to 5 = these practices predominate [80-100% of the time]). For example, the item 'Support for communication skills' might be rated as a 3 on *facilitating* (A), 4 on *directing* (T) and 2 on the *withdrawn* (C) dimension. When used as a measure of teaching quality, ECCOM scores are based on classroom observations of minimum three-hour duration with certified staff (Stipek & Byler, 2004, p. 383). However, not all items in the measure were relevant for this study; for example, some items in the instruction scale required that literacy and math instruction be observed. The social climate scale lists items on adult responsiveness, without stipulating specific activity content (i.e. literacy instruction). Since my purpose was not to assess practice quality in the Grade R classrooms, but to indicate practitioners' teaching style, the social climate scale was deemed sufficient for this analysis.

5.2.2 Items and dimensions for ECCOM social climate scale

The social climate scale consists of 6 items: *1. Practitioner warmth*; *2. Relevance of activities to children's experiences*; *3. Support for communication skills*; *4. Individualisation of learning activities*; *5. Support for interpersonal skills*; and *6.*

Student engagement. As noted earlier, Items 1 and 2 were only scored for the *child-centred* or *facilitative style*, while items 3, 4, 5 and 6 were scored on all teaching styles (for full procedure and item overview, see *Video coding scheme* in Appendix eleven). High scores for the *facilitative style* (A) indicated a supportive teaching role, where practitioners interacted directly with children in a warm, responsive manner; they used concrete and relevant materials, engaged children in conversations that drew on their experiences and encouraged them to elaborate on their thoughts; they supported peer interactions, were attentive to children's needs and accomplishment, and made attempts to engage all children in a manner that supported their learning.

High scores for the *directive style* (T) were given when practitioners adopted a highly involved teaching role: in practice, they tended to control all conversation, asking mainly closed-ended questions; tasks had little flexibility and practitioners emphasised right and wrong answers; children spent a lot of time in seated, adult-led activities with little peer interaction, and were engaged in rote activities where some struggled to participate. High scores on the *withdrawn style* (C) indicated a less involved teaching role: children were rarely engaged in elaborative conversations, nor did the practitioner actively support their communication skills or peer interaction; children could interact with peers and complete tasks more or less as they wished, with little emphasis given to their accomplishments; equally, children would move from one activity to the next, in sporadic or aimless manner. Since the ECCOM had not seen previous use in a South African education context, it was essential to contextualise items.

To this end, Sne and I viewed and coded videos independently, comparing our scores and discussing item definitions in great detail, gradually making nuances explicit. As one example, the South African practitioners often began adult-led activities by revising previous lessons where children gave one-word answers (e.g., Practitioner: *When it is cold, what do we wear?* Child 1: *Jacket.* Child 2: *Scarf*). One could argue that she was connecting to prior lessons, and yet this practice did not fit examples given for item, *2. Relevance for children's experiences: 'Practitioner calls attention to a story previously read; children write in science journal about an experiment'* (Stipek & Byler, 2005). Nor did Sne and I note instances that resembled these two examples from the original ECCOM coding manual. During our discussions, we agreed that 'connecting to prior lessons' should only be coded if

discussion between children and practitioners was observed, and not for revision with one-word responses. These iterations to refine items took place over eight months. In the final coding scheme, text in bold signified descriptions that clearly distinguished the A, T and C styles in the South African classrooms; blue text were clarifications that helped to achieve more consistent coding of classroom practices. The final video coding scheme for teaching styles can found in Appendix eleven.

5.2.3 Descriptive statistics for ECCOM social climate scale

The three subscales all had high internal reliabilities (see Table 17). For the *facilitative style* (A), Cronbach's was .913, but would be higher if item 5A was deleted (.926). This item also correlated above .5 with all items under the *directive style*. By contrast, this same item 5A only correlated above .5 with two items on subscale A (4A and 6A). Item 5A refers to a practitioner, who creates opportunities for cooperative, small-group activities and promotes children's social problem-solving skills. Such practices were rarely observed in the South African videos (Mean = 1.71 - SD = .918). As a comparison, the mean for 5A in Tang and colleagues' (2017) ECCOM validation study was 2.78 (SD = .98) for the Finnish and 2.70 (SD=1.01) for the Estonian first grade teachers (2017, p. 283). Hence, 5A was excluded from the analysis. For the *directive style* (T), Cronbach's alpha was .937. All items on this subscale correlated above .3, and reliability would not be improved by deleting items. For the *withdrawn* style (C), Cronbach's alpha was .898 for all items, but improved to .903 if 6C (Student engagement) was deleted. Accordingly, this item was excluded.

Table 17: Inter-rater and Internal reliability scores (α) for styles A, T & C

Teaching style	Inter-rater reliability (ICC)	Internal reliability (α)
Facilitative style (A)	.63	.926
Directive style (T)	.55	.937
Withdrawn style (C)	.60	.903

Inter-rater reliability was assessed using a one-way random, absolute agreement, single-measures ICC (McGraw & Wong, 1996) to assess the degree to which coders were consistent in their ratings across cases. The choice of this specific ICC analysis was based on a subset of cases being coded by different coder pairs (Hallgren,

2012). A fellow doctoral student and a research assistant with the LEGO Foundation volunteered to co-code videos for reliability purposes. Both coders were well-educated although neither was familiar with the South African research context (as would of course be ideal). Since the purpose was to establish if other coders could apply the adapted ECCOM social climate scale with sufficient consistency, rather than achieve a fully crossed study with minimal discrepancies, the training was kept brief. It consisted of a one-hour introduction, where I explained the logic and individual items of the video coding scheme, followed by a trial coding and subsequent discussion of instances where we disagreed on scores. After the training, a subset of videos was randomly selected (10% = 4 videos). One ICC analysis was conducted per teaching style. The number of cases per ICC analysis were: A = 25, T = 20, C = 15. The resulting ICCs for the three teaching styles ranged from fair to good, ICC = .55-63 (Cicchetti, 1994). According to Hallgren (2012), single-measures, one-way random ICC yield lower scores compared to ICC for fully crossed studies. Although higher scale reliability scores would undoubtedly be possible through more extensive training and rounds of trialling the coding scheme, these results showed that the adapted ECCOM social climate scale could be used by other coders with fair to good reliability.

Table 18: Correlations matrix for teaching styles A, T & C

	Directive style (T)	Facilitative style (A)	Withdrawn style (C)
Directive style (T)	-	-.625**	-.409**
Facilitative style (A)	-	-	-.366*

**Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

As seen in Table 18, the *facilitative* and *directive styles* correlated fairly highly (.625). This made sense in that both are styles where practitioners take a more involved role with children. By contrast, the *withdrawn teaching style* saw lower correlations with these two subscales (C-T = .409 and C-A = .366). Taken together with the reliability scores listed in Table 17, as well as the measure's conceptual basis, the ECCOM social climate scale was found to be well suited for capturing practitioners' teaching styles across play and adult-led activities. This concludes section five on methods focused on research question two, participants' classroom practices. The next section six describes methods used to map practitioners' change journeys over time.

6. Mapping change journeys: integrating findings

Up until this point, the methodology chapter has addressed the study's approach to multi-method triangulation (Creswell & Miller, 2010); namely, that findings from in-depth and more prescriptive methods were combined for each construct in the CAMCC (Gregoire, 2003): practitioners' educational beliefs, their initial and ongoing efficacy, and reflective approach. This was done to validate findings for the South African early education context. Then, by mapping the focal participants' change journeys, and holding these up against the model's three scenarios, the CAMCC was also triangulated (i.e., person triangulation, Wellington, 2015, see sections 1.1 and 1.2 in this chapter). Next, I turn towards research question three, which asked how well the CAMCC accounted for shifts in the focal participants' beliefs and practices. The integration of findings across data sources rested on the premise that while professional change is complex and deeply personal, patterns in how educators respond to reforms and pedagogical innovations remain patterned (e.g., Brody & Hadar, 2015; Pianta et al., 2014; Opfer & Pedder, 2011).

In this study, the CAMCC provided an underpinning model theorising how these patterns might play out: It identified constructs as indicators of practitioner change journeys and scenarios that explained how these indicators interacted in complex ways. Figure 18 shows how all indicators were combined in a profile matrix (Miles, Huberman, & Saldaña, 2014, p. 162 & 228): educational beliefs, efficacy and reflective orientation, and teaching practice. In the profile matrix (Figure 18), summarised findings on each practitioner's educational beliefs and teaching practice served to shed light on shifts over time, while findings on their sense of efficacy and reflective approach helped to explain these changes (Miles, Huberman, & Saldaña, 2014). In the matrix, educational beliefs comprised practitioners' cluster membership (i.e., their responses to the perceptions questionnaire and subsequent grouping, see section 3.2 in this chapter), along with personal findings from the thematic interview analyses: views on learning, including in play, own and the children's roles in teaching situations (see section 4.1 in this chapter).

The middle part of the profile matrix has change mechanisms, including each practitioner's dominant reflective orientation, initial teaching efficacy, and later sense of efficacy for teaching the curriculum through play (sections 3.3, 4.2 and 4.3 in this chapter). The bottom part covers each participant's educator role in play, teaching

style overall and the style used in the two activity types, adult-led and play (section five in this chapter). In the profile matrix, change over time is captured in the two columns, starting point and end point.

Figure 18: Illustration of practitioner profile matrix

Educational beliefs		
	Starting point	**End point**
Cluster membership		
Learning perceptions		
Learning in play perceptions		
Educator role conception		
Learner role conception		
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation		
Initial teaching efficacy		
Efficacy for teaching through play		
Teaching practice		
	Starting point	**End point**
Educator role in play (% of time)		
Teaching style overall		
Teaching style in play activities		
Teaching style in adult-led activities		

One profile matrix was created for each of the seven focal practitioners who had complete data: Maude, Anele, Fikile, Lihle, Liyanda, Thembi and Martha. Lisa, was omitted, since her interview data was incomplete. The study's final analysis centred on contextualising the emerging change journeys, which is described next.

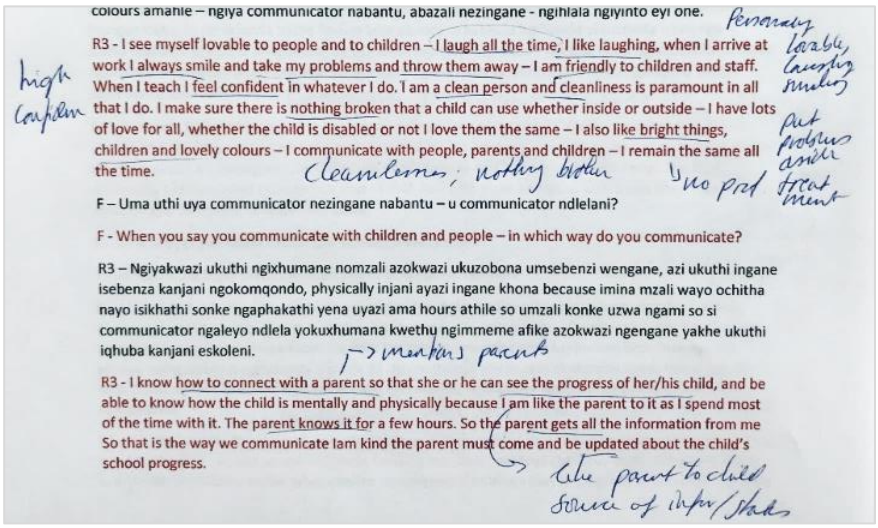
7. Analysis of focus group interviews

The analysis of data from the two focus group interviews served to answer the fourth research question about salient factors for this cultural context, which might influence the South African practitioners' change journeys. As such, interview questions served to elicit insights on their sense of professionalism, working conditions, concerns, and daily experiences in practice. Unlike approaches used to analyse each construct in the CAMCC and to integrate findings in the profile matrices, this analysis focused on group level findings – hence, thematic analysis was chosen. The process followed phases recommended by Clark and Braun (2006; 2012). That is, reading the transcripts in detail to become familiar with the data, creating initial codes, searching for themes, re-coding and consolidating themes, before defining them with examples. On this occasion, I kept the interview transcripts intact to better capture points on personal and external factors in context of group discussions. Each step in the focus group analysis process is detailed in the next sections.

7.1 Becoming familiar with the focus group data

More than any other data source in the study, the focus group interviews offered vivid images of the practitioners' everyday lives: adversities and hardships they faced, but also stories of resiliency and successes that shaped their work with children. After welcoming practitioners, the two interviews followed rounds with the moderator asking a question and inviting a group member to respond, making sure that each member had a turn to speak and share experiences. Sometimes practitioners gave brief descriptions in response to a question, for example, how many colleagues they had at their site and how they typically assisted one another. At other times, respondents told longer stories about an incident in practice – particularly for this prompt: *Please tell about a day that was difficult in your practice within the last few months*. Such personal narratives needed time to unfold and to be acknowledged, and so the moderator would ask clarifying questions to learn more about the people involved, the sequence of events and later implications. Finally, the interview setup and language barrier meant responses could not be identified with a given practitioner, and so codes and notes were made at group level.

Figure 19: Example of transcript with note-taking (1st reading)



colours amanie – ngiya communicator nabantu, abazali nezingane - ngihlala ngiyinto eyi one.

R3 - I see myself lovable to people and to children – I laugh all the time, I like laughing, when I arrive at work I always smile and take my problems and throw them away – I am friendly to children and staff. When I teach I feel confident in whatever I do. I am a clean person and cleanliness is paramount in all that I do. I make sure there is nothing broken that a child can use whether inside or outside – I have lots of love for all, whether the child is disabled or not I love them the same – I also like bright things, children and lovely colours – I communicate with people, parents and children – I remain the same all the time.

F – Uma uthi uya communicator nezingane nabantu – u communicator ndlelani?

F - When you say you communicate with children and people – in which way do you communicate?

R3 – Ngiyakwazi ukuthi ngixhumane nomzali azokwazi ukuzobona umsebenzi wengane, azi ukuthi ingane isebenza kanjani ngokomqondo, physically injani ayazi ingane khona because imina mzali wayo ochitha nayo isikhathi sonke ngaphakathi yena uyazi ama hours athile so umzali konke uzwa ngami so si communicator ngaleyo ndlela yokuxhumana kwethu ngimmeme afike azokwazi ngengane yakhe ukuthi iqhuba kanjani eskoleni.

R3 - I know how to connect with a parent so that she or he can see the progress of her/his child, and be able to know how the child is mentally and physically because I am like the parent to it as I spend most of the time with it. The parent knows it for a few hours. So the parent gets all the information from me So that is the way we communicate Iam kind the parent must come and be updated about the child's school progress.

Figure 19 above illustrates part of a transcript page with note-taking from the first round of reading – black text indicates the original responses in IsiZulu, while red text is the translated version. In this example, I noticed comments relevant to personal factors, such as this practitioner's high level of confidence, her emphasis on being lovable, laughing and smiling, and on cleanliness and nothing being broken at the ECD site, her conceptions of being a parent-at-school to children, and source of information about their child's progress in school for the actual parents. Through such notes, I began to form an understanding of relations between actors in this context, roles practitioners saw for themselves as professionals in this community, main concerns, and how circumstances helped or hindered their efforts.

7.2 Generating initial codes

This initial reading of the transcripts suggested codes for personal factors, which centred on reasons and ways in which practitioners joined the profession; how they understood their work, roles and responsibilities; and finally, their concepts of being educating professionals in this setting. Hindering factors emerging from the first round of reading and note-taking included signs of poverty and adverse working conditions, strained relations with parents, including aggression and pressure, and demands posed by authorities. In terms of helping factors, practitioners highlighted children as highly motivating, gave examples of resourcefulness and entrepreneurship, collegial support at their sites, as well as educational tools and their uses. Finally, authorities and NGOs seemed to figure once more, but this time as implicit sources of support.

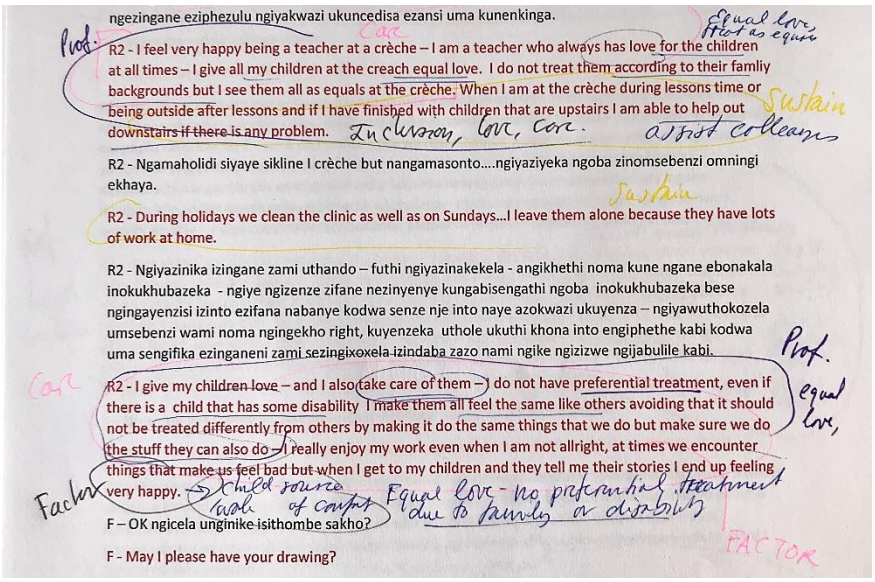
7.3 Searching for themes

During the second reading, these initial codes were used to categorise statements that described being a professional – duties, values and appropriate practices – and different factors, which practitioners mentioned. After this round, I began to see a pattern with factors linking to distinct aspects of practitioners' roles and duties. For instance, while the two groups noted using educational toys and materials to assess children's healthy development, materials played a more prominent role in their teaching of children and during play activities. Parents were regarded with caution and described as a hindering factor, but mainly when practitioners were describing efforts to care for children and attend to their welfare. Finally, some aspects of their work seemed to underpin their practice with children but did not fit directly into categories of care and education. Based on these reflections, I drafted a three-theme structure with associated factors included under each: *childcare responsibilities*, *teaching and classroom management* and *self-sustaining sites* (infrastructure).

7.4 Reviewing potential themes

In the third and fourth rounds of reading, both transcripts were coded and checked according to the three-theme structure, leading to refined names and categories for these themes. As one example, I noted that comments on play practices resonated with themes found in earlier analyses, and this led to a revised second theme called *teaching and managing play*. The unit of analysis was whole responses given by one practitioner (one turn-taking) and all interview statements were coded; ambiguous or short sentences, along with responses of yes or no were coded as such and put aside. Figure 20 exemplifies a transcript page with codes after the fourth round of reading and show two theme codes: *sustain* in bright yellow and *care* in pink. The dark purple text and circling were highlights made during the second reading.

Figure 20: Examples of transcript with theme coding (4th reading)



The two transcripts totalled just over 100 pages, and by the end of four readings, most pages were dense with codes referring to themes. To consolidate points across transcripts, I reviewed statements for each theme in turn and summarised points in a separate document. This approach helped to tease apart theme descriptions and their related factors. The resulting three themes were named as a final step and defined with examples in the findings section (see chapter six, section 2).

Chapter four | findings on beliefs and change mechanisms

The study's first research question concerned practitioners' educational beliefs, teaching efficacy and reflective orientation, which the change model identified as central indicators. In the following sections, findings for each construct are presented in turn, along with how these changed over time for the eight focal practitioners. Section one has findings from the exploratory factor analysis of perceptions questionnaire responses followed by sections two and three on the thematic analysis of interviews on perceptions of play and learning, leading to changes over time at group level in section four. Section five offers summarised findings for each practitioner. In section six, results from the thematic analysis of the South African participants' teaching conceptions are described, including changes over time at the individual level. The eight focal practitioners' initial and ongoing efficacy scores are presented in section seven, and results on the second change mechanism, reflective orientation, are found in section eight. This chapter concludes with a synthesis of findings for each practitioner on constructs addressed by research question one.

1. Results from the perceptions questionnaire

Results reported in this section draw on two analyses: an exploratory factor analysis of the perception questionnaire responses to determine underlying factors in how practitioners rated activities as play and learning, and the cluster analysis, where respondents with similar ratings were grouped.

1.1 Results from exploratory factor analysis

Two perception factors emerged from the exploratory factor analysis, accounting for 62.16% of the total variance in responses (see Table 19 for item loadings by factor, and Table 20 for the structure matrix). The first factor consisted of four items that emphasised activities with language and vocabulary as the learning goal (variance explained = 42.94%, eigenvalue 2.576). The second factor had two items (variance explained = 19.215%, eigenvalue 1.153), which were both child-directed, hands-on activities (i.e., using building blocks or sets and using empty cardboard boxes for games). During a member checking session with TREE mentors from the in-service

support programme (Creswell & Miller, 2000), factor 1 was identified as typical 'morning ring' activities (mainly adult-led) with language learning as a shared theme (Cronbach's alpha = .759), while factor 2 represented common 'free choice time' activities (mainly child-led) (Cronbach's alpha = .564).

Table 19: Pattern matrix for perception items

Perception items	Factor 1 *Ring time*	Factor 2 *Choice time*
12 *Singing and dancing*	.738	
17 *Making music and rhythms with handmade instruments*	.694	
18 *Retelling a story in their own way or coming up with a story*	.643	
9 *Using flashcards with words and pictures or with simple math concepts*	.601	
2 *Using building blocks or building sets*		.657
4 *Using empty cardboard boxes for games*		.583

Extraction method: Principal Axis Factoring.

Rotation method: Oblimin with Kaiser Normalisation.

Table 20: Structure matrix for perception items

Perception items	Factor 1 'Ring time'	Factor 2 'Choice time'
12 *Singing and dancing*	.735	.322
17 *Making music and rhythms with handmade instruments*	.683	.283
18 *Retelling a story in their own way or coming up with a story*	.643	.286
9 *Using flashcards with words and pictures or with simple math concepts*	.615	.299
2 *Using building blocks or building sets*	.309	.665
4 *Using empty cardboard boxes for games*	.246	.577

Extraction method: Principal Axis Factoring.

Rotation method: Oblimin with Kaiser Normalisation.

1.2 Cluster analysis results

The cluster analysis, based on respondents' ratings of factor one, *Ring time activities*, and factor two, *Choice time activities* as play and setting a base for academic learning, resulted in two perception groups (see Table 21). In the first *All play* group (n = 66, 69% of sample), respondents rated all activities highly (all means over 5), but

preferred choice time activities as a form of play over ring time activities. This group further rated choice time activities as equally high on play and academic value, and rated choice time activities highest on academic learning value overall, while ring time activities were rated slightly higher on academic value than as play. A second and more *Selective* group (n = 19, 20% of the sample) had lower overall ratings (all means under 5).

Table 21: Mean (SD) and range for perception ratings by cluster

	***All play* group (Ap) *n* = 66**		***Selective* group (Se) *n* = 19**	
Perception factors	M (*SD*)	Range	M (*SD*)	Range
Ring time (F1)				
Perceptions of play	5.03 (.77)	2.71-6.00	4.18 (.59)	2.86-5.00
Academic value	5.24 (.51)	4.45-6.00	4.37 (.69)	3.00-5.14
Choice time (F2)				
Perceptions of play	5.40 (.45)	3.64-6.00	4.43 (.45)	3.00-5.00
Academic value	5.39 (.44)	4.45-6.00	4.35 (.42)	3.60-5.09

At first glance, patterns in preferences for activities as play and academic value were similar for this group: *Ring time* activities were valued slightly more as academic learning than play, just as ratings of *Choice time* activities as play and on academic value were comparable. However, unlike the *All play* group, respondents in the *Selective* group did not rate *Choice time* activities highest on academic value; instead, their ratings for both activity types were similar. Finally, results from Wilcoxon rank sum tests showed that the two clusters, *All play* and *Selective*, differed significantly on mean scores for the four variables: 1) *Ring time* activities rated as a form of play ($p < 0.001$), 2) academic value of *Ring time* activities ($p < 0.001$), 3) *Choice time* activities as rated as a form of play ($p < 0.001$), and 4) academic value of *Choice time* activities ($p < 0.001$). Together these findings confirmed two distinct perception profiles among the South African respondents.

1.3 The eight practitioners' perception profiles

At the outset of the study, the eight practitioners had been identified based on diverging responses to the perception questionnaire and using criteria for the three perception groups found by Fisher and colleagues (2008). This section presents results for these focal practitioners on play and learning perceptions, following the two groups emerging from the South African data (see Table 22). Five of the eight practitioners were in the *All play* group: Fikile (P3), Lisa (P4), Lihle (P5), Liyanda (P6), and Martha (P8). Three practitioners were in the *Selective* group: Maude (P1), Anele (P2), and Thembi (P7).[3]

Table 22: Perception ratings for focal practitioners on factors 1 and 2

Participant no.	P3	P4	P5	P6	P8	P1	P2	P7
Cluster (Ap / Se)	Ap	Ap	Ap	Ap	Ap	Se	Se	Se
Ring time (F1) Perceptions of play	4.00	6.00	6.00	5.00	5.00	4.50	4.50	4.75
Academic value	5.50	5.50	6.00	5.00	5.50	3.75	4.50	4.75
Choice time (F2) Perceptions of play	5.50	6.00	6.00	5.00	5.50	3.50	5.00	4.00
Academic value	5.00	4.50	6.00	5.00	5.00	4.00	4.00	4.00

Reviewing means for the eight practitioners showed that higher and lower overall ratings across perception factors resonated well with the two emerging clusters. Even so, distinctions seen at cluster level were sometimes less evident at the level of individual practitioners. For instance, means for the *All play* group on perception factors indicated higher play-ratings for *Choice time* activities (see Table 21). This was the case for two out of five members of this group, namely Fikile (P3) and Martha (P8). By contrast, Lisa (P4), Lihle (P5), and Liyanda (P6) gave similar play ratings for *Ring* and *Choice time* activities. Then, three practitioners in the *All play* group rated *Ring time* activities higher on academic value: Fikile (P3), Lisa (P4) and Martha (P8). Lihle (P5) and Liyanda's (P6) means were the same for all four variables. Finally, with a noticeably lower rating of 4.00 for *Ring time* activities as

[3] In this and later sections, where tables list participant IDs (i.e., P1), practitioners are named in the text with pseudonyms and IDs together to aid the reader (i.e., Maude, P1).

play, Fikile (P3) stood out from her peers in this group; still, her ratings were high overall for the remaining three variables, which might account for her membership in the *All play* cluster. In line with characteristics for the *Selective* group, Maude (P1), Anele (P2) and Thembi (P7) had lower ratings overall. When compared to peers in the *All play* group, they also assigned lower academic value to *Choice time* activities. The three practitioners in the *Selective* group had similar ratings, though Maude (P1) rated academic learning value of *Ring time* activities lower. With higher ratings of *Choice time* activities as play, Anele (P2) was an exception in the group.

Considering the results from the whole group and focal practitioners, the most distinctive characteristics of the two perception profiles were overall higher ratings for the *All play* group and lower ratings for the *Selective* group. Other distinctions noted for *All play* practitioners at whole group level did not necessarily reoccur for the eight practitioners: it was not clear that these five practitioners rated *Choice time* activities equally high on play and academic learning, nor were *Choice time* activities assigned higher academic value overall, and only Fikile (P3) rated *Ring time* activities more as academic learning than play. Two practitioners in the *Selective* group, Anele (P2) and Thembi (P7) did rate *Choice time* activities lower on academic value, as seen for the whole group, while Maude (P1) was an exception on this point. Together, these findings suggested a more enthusiastic, and perhaps less discerning, *All play* perception profile, compared to more cautious, and perhaps uncertain or more discerning practitioners, with a *Selective* perception profile. In the next sections, results on the focal practitioners' perceptions of play and learning, as found through thematic analysis of their interview data, are presented.

2. Thematic analysis of play perceptions

Findings from the thematic analysis of practitioners' play perceptions were based on a total of 69 interview statements, which considered the nature of children's play. Both participants' descriptions of children's activities in the videos and on how they justified card choices were included in the analysis. Across the eight practitioners, three shared themes emerged where child choice (but not self-directed or creative efforts) wove a common thread (see Table 23).

Table 23: Distribution of statements by play theme

Play themes	Total
Play is vigorously active, joyful and chosen	**39**
Play requires abundance	**13**
Play reveals aptitudes	**17**
Total	**69**

All eight practitioners recognised play's vigorous, joyful and chosen nature, while five in the group highlighted abundant toys and space as critical for good play (Maude, P1; Anele, P2; Lihle, P5; Thembi, P7 and Martha, P8). Seven practitioners noted how children's play preferences could reveal their aptitudes (all, except Anele, P2). For the play perception themes, each practitioner was represented with 7-14 statements (8 statements on average).

2.1 Theme one – play is vigorously active, joyful and chosen

This theme consisted of 39 statements. Practitioners consistently preferred a card showing a child and adult smiling and playing with hula hoops as most play. This preference aligned well with their view of play as vigorously active, with typical forms of play including running, jumping, dancing and moving the whole body. For some, this strong physical dimension to play was coupled with children expressing themselves when talking, but also through music:

"This is play most because he is moving the whole body. There is no part of the body that is not moving when they are playing hula hoops; everything is moving, even the head and changes the way he is standing." (Lihle, visit 2).

"Because here, they are playing; these two of them are chasing each other, as they are chasing each other, there are things that are happening in their blood. It is not the same as a child who is sitting still, who is playing with marbles. This one is exercising, there is something happening." (Maude, visit 2).

"He is playing guitar here, using muscles as he is playing guitar and singing" (Liyanda, visit 2).

"I will say it is play very much because children love it; everyone wants to join in when we are dancing." (Anele, visit 1).

As exemplified with the last statement, practitioners further highlighted enjoyment and choice as essential aspects of play activities, for instance when children picked a favourite area or joined adult-led play activities they liked. The cards chosen to represent play the least featured passive or distracting activities (e.g., watching television), chores (e.g., combing hair or tying shoelaces), and school-like activities. As such, card choices underscored the participants' perception of play being active, chosen by children and joyful.

2.2 Theme two – good play is orderly and requires abundant toys

A second theme with 13 statements revolved around conditions needed for good play. Having an abundance of space and play materials, and making sure that children knew how to use play materials, was seen as necessary for good play:

"Each and everyone are enjoying playing. It looks like they are having fun and laughing, each one has their own hula hoops and they are not fighting for it with anyone." (Martha, visit 2).

"I felt bad because the shortage of toys causes them to end up using things that are meant for something else to do something else. Can you see, this is a head wrap to use for pretending to be a mom, but she ended using it as a blanket for the baby." (Thembi, visit 1).

The statements given above illustrate deep concerns, which practitioners held about lack of toys and space for play, as well as children's appropriate use of materials. What could be regarded as inventiveness in the second excerpt (i.e., re-purposing a headscarf to wrap a baby doll), was taken as a sign of material lack, leading to a feeling of shame ('I felt bad'). Maintaining good play was also less about practice framing or children learning to share toys:

"What was on my mind here is to help them because I can see that they had a little confusion – the other one is reading a book and at the same time wants to play with the puzzle. As you can see me getting closer, I'm trying to resolve that problem. If one is playing puzzles, they must play puzzles. The ones reading must read books. Because you cannot do it all at the same time." (Maude, visit 1).

If children were not able to choose a preferred play area, or if they fought over toys or used them in unintended ways, practitioners attributed these disruptions to material lack, and focused on solutions such as reminding children to play appropriately, removing a disputed toy, or creating more toys from recycled resources.

2.3 Theme three – play choices reveal children's aptitudes

Theme one and two pointed to children's choice of play areas, and having enough materials to accommodate this choice, as essential for good play. The third theme with 17 statements added a layer with play choices seen as revealing, not only children's preferences but their talents, characters, and even future careers:

"These children, two of them, they chose themselves to go to the block area. When I came to them, I'm like, okay, this means when they [grow] old, they give me a sense that they will be builders, actually, both of them. They are building a garage to put their cars in it. Oh, it dawned on me that they will be builders, that is why they chose block area." (Martha, visit 1).

"You can see their talents during this time of playing in certain areas. This is where you notice that this one likes going to the block area, that's when you see maybe s/he [is a] future builder, maybe there at the clinic, that means s/he is a future nurse." (Thembi, visit 1).

Play moments and children's dispositions, as articulated by the practitioners, often resonated with realistic scenes from home life and common occupations; sometimes they held an undertone of gender norms: typically, girls pretended to be mothers and nurses, while boys played with blocks and cars. References to non-realistic play scenarios were rare. One practitioner noted a child building a tower from foam cups as 'not real.' Another remarked on children taking on a crocodile at the Umgeni river:

"There were three of them, in fact, and, 'my friends,' I asked, 'why are you ironing, what's happing?' They said, they are busy, going to Umgeni. 'Okay, fine, you are all going to Umgeni to do what?' And they said, 'to swim' and I said, 'how can you go swimming on such a cold day, and do you know there is a crocodile in Umgeni river?' And they said, they don't care about the crocodile, so I picked up that they are brave." (Lihle, visit 1).

Putting together the three themes on practitioners' play perceptions formed an intriguing picture. By its nature, play is lively and dynamic. Physical prowess, joy and the vigour of children's expressiveness were all valued aspects of play, while more

imaginative sides were less so. Practitioners' views of children's play were further shaped by constraints, such as material shortage, norms for appropriate use, and what they saw as children's predispositions. These patterns in play perceptions – joyful, vigorous and chosen play, requiring abundance and revealing child aptitudes – emerged as conjoined themes with no evident hierarchy or sense of progression. The case was different for perceptions about learning, which are presented next. These themes spanned learning as children reproducing curricular content to more active forms of learning featuring performance and understanding that eventually stretched beyond the classroom.

3. Thematic analysis of learning perceptions

Themes in this analysis concerned practitioners' perceptions of children's learning as expressed in the interviews – what they saw as signs of learning and what children learned in play. A total of 247 (of which 91 referred to learning in play) comprised the four final themes: learning as reproducing knowledge, learning as performing correctly, learning as understanding and applying, and learning as empowering children (see Table 24 for distribution of statements by learning theme).

Table 24: Distribution of statements by learning theme

Learning themes	*Learning*	*Learning in play*	Total
Reproduction	80	32	112
Performance	47	41	88
Understanding	12	18	30
Empowering	17	0	17
Total	**156**	**91**	**247**

Unlike for play perceptions, where no distinct hierarchy or order emerged, themes on perceptions of learning revealed a progression and differences in the group; typically, a practitioner was represented in one or two learning themes, but not in all themes. After introducing each learning theme in detail below, this point is addressed further in the next section four on practitioner perceptions and changes in these over time.

3.1 Theme one – learning is reproducing

With 112 statements, of which 32 referred to signs of children learning in play, this learning theme was most prominent in the data. In this theme, children demonstrated learning by listening to and remembering lessons taught, and by giving correct answers to questions posed by the practitioner. Typical topics in the theme were naming colours, counting, saying the alphabet, days of the week, months of the year, and choosing the right weather condition of the day. The practitioners would also express concern and surprise if children did not give expected answers:

"I was surprised when children forget how many months are in the year. They said a wrong number like, how, because we always say them, every day, and today they forget." (Martha, visit 2).

"Here too, I wanted to see if they can see the weather conditions, how it is, and if they are going to say the correct answer. That is why I just sent them outside without telling them how is the weather. So, I wanted to see if they are going to give me the correct answer." (Fikile, visit 2).

"Here, I felt happy, because she pointed to the correct day and we last did this on Thursday. On Friday, they did not point, but, because they are not just reciting this, they know it well, that is why she was able to point." (Thembi, visit 1).

This theme of learning as knowledge reproduction extended to play activities. Here, a sign of learning was when children's play overtly related to a daily theme, or children demonstrated academic learning in play:

"It is still the same, I was still there at the creative area. They were drawing. I was happy to see others drawing their families, because we were learning about my family." (Fikile, visit 2).

"They remember that in the morning we sang about building a temple, a temple is a house, so then they remembered that we should sing that song because it is related to the theme of the day." (Lihle, visit 2).

"I can say, because when I ask questions, they can answer them. It shows that they are learning, not that they are just playing, but they play and learn." (Liyanda, visit 1).

This theme of learning as reproducing correct answers and content knowledge was the most passive, with children responding to questions asked by the practitioner. The next theme was characterised by activity in the sense of performance.

3.2 Theme two – learning is performing

In this theme, 88 statements about learning focused on children's proficiency with an activity, both academic and play. Children demonstrated learning by performing well, following the correct approach and according to the practitioner's instructions. This could be painting within a circle, or doing actions in a specific sequence:

"Okay, at this time, I was teaching the learners to learn to place the blocks in the colour order that I am teaching about." (Liyanda, visit 1)

"In this moment, it is still the same as we are continuing saying the parts of the body. I want to see if they are going to do as I am doing." (Fikile, visit 2).

"Here, I am thinking to teach them the difference between up and down, firstly. Then, secondly, to know if they can grasp a concept that you introduced immediately, because I introduced sitting down and up. Now, we haven't done up and down before, we usually do walking, jumping and running. So, I saw that some of them can grasp a new concept easily, some, but children are not the same. But you have to keep repeating something until they grasp it and understand it." (Lihle, visit 2)

Learning as performance was also about knowing how to behave in class; children raising their hands was appropriate behaviour but smearing each other with paint was not. In play, learning was further recognised as children imitating adult jobs and home life, such as serving tea to guests or going to the shops:

"I felt happy because s/he knows when s/he is here, in the fantasy area, they have to act. To do kitchen stuff since they are placed here as toys. S/he could see the cups and used them to make tea with them and serve them in the tray." (Thembi, visit 1).

"Here, they are continuing with playing and learning. Most of them are learning if you are going to the shop, you bring money. And you buy what you need and go back home." (Fikile, visit 2).

The two learning themes described so far emphasise correctness: giving the right answers and performing appropriately. The next two themes shifted towards learning as understanding lessons and mastering skills well enough to apply them in the classroom and in children's lives outside school.

3.3 Theme three – learning is understanding

In this theme, 30 statements described learning as children understanding lessons taught and applying their knowledge in a practical sense. This came out as responses referring to real-life situations and connecting ideas:

"It was that they should have an open mind, it was helping them to have an open mind. Because I was asking 'what did you build? Tell me, what did you build?' So, the child can have an open mind, maybe, they mustn't, if they see a car on the road, instead of seeing something that is running, they can see it's a car and what it does." (Lisa, visit 1).

"At this moment, what came to my mind was that children have to know many different seeds. They must know not only that mealies are the only things with seeds. The fruits also, as they see, the tree, they also start as seeds that are planted before the tree grows and produces fruits that have been planted." (Lihle, visit 2).

"It is learning, in a way, because he can compare something that is real and the one, he is building himself. That means that person has learned. He can match something that is real, and the one that looks alike." (Thembi, visit 1).

As shown with the last excerpt, learning as making real-world connections was likewise present in statements about play. Here, practitioners saw learning in both an exploratory and practical sense, with children applying new knowledge in play or grasping how something worked through using play materials:

"Okay, these two boys, as we were learning about farming, we are learning about ploughing, what they are doing here. The other one, when I was talking to him, he said he is drawing farmers and the other one told me that he is drawing things that you find in the garden, that are planted in the garden. Things that he was drawing, as he drew mealies, apples and a pear." (Lihle, visit 1).

"It is play, basically, but there is no wheel that is made with this thing. But he was able to put things together and it ended up looking like a wheel." (Thembi, visit 1).

While statements in this theme referred to real-life situations, such as knowing different forms of transport or ploughing, the scene of application remained the classroom with the goal of understanding. The final learning theme stretched beyond the classroom, with practitioners aiming to equip children to cope.

3.4 Theme four – learning is empowering children

In the interviews, concerns for dangers in the townships and communities weighed on the respondents' minds. Dangers could be natural hazards, like the risk of being infected from drinking or swimming in contaminated water but also dangers at home – fire hazards and reckless requests from family members. Concerns were drawn both from the curriculum (i.e., a theme about fire and firemen) and from their own, and occasionally painful, life experiences. In this final learning theme, empowering children, 17 statements focused on equipping children to face such dangers, to cope and stay safe outside the classroom, and to stand up for themselves:

"(…) That is why it is important to that you teach them, and you include things like this, which are life lessons. I had in mind to explain that when an adult sends you to do something, you have to respect them, but you have to tell them that at school, they said cigarette and alcohol, we must not be sent to get those, and they must know that." (Maude, visit 2).

"(…) Our theme these days, we are talking about fire and fireman. We are dramatizing this scenario now, and sing together with children, and we are happy that if the clothes are burning, what do we do? What do my friends do at home if they see burning? We crawl, go to a safe area." (Anele, visit 1).

Some practitioners took this empowering learning theme even further, with children becoming agents of change. Their expressed aim of teaching was that children could encourage their own families to make positive choices:

"What was on my mind was to encourage children so that they can encourage people at home to plough because ploughing helps. People must plant their own food because it helps, and it makes people have money. Because sometimes your garden can produce more food than expected and you can sell them (…)" (Lihle, visit 1)

Unlike for the previous three learning themes, no specific form of children's learning in play emerged for the empowering theme. One practitioner, Anele, did describe how she and the learners 'dramatized' crawling away from fire, but this activity did not take place during children's free choice time.

4. Practitioner perceptions and changes over time

The thematic analysis painted a landscape of play and learning perceptions for all eight practitioners, taken together. As noted above, not all practitioners were part of every theme. Reviewing how individual practitioners were represented in the themes, subtle shifts became clear, especially for learning perceptions.

This section highlights differences in practitioners' perceptions and how these changed over time, starting with perceptions of children's play followed by their learning perceptions.

4.1 Changes in play perceptions over time

Across the eight practitioners, the interview data revealed shared perceptions of good play as vigorously active, joyful and chosen. In turn, good play required abundant toys and space to prevent conflict among children and to ensure that their play choices were not constrained. These choices exposed children's aptitudes, and even their future careers. Table 25 presents an overview of distribution of statements by play theme. From early to later in the study, practitioners' comments about play shifted more towards its physically active and vigorous nature; children's aptitudes in play was less in focus later in the study. The necessity of having abundant toys and materials was a small, but steady theme over time.

Table 25: Statements on play perceptions from visit 1 to 2 (and revisit)

Perception themes	Visit 1	Visit 2/Revisit	Total
Play is vigorously active, joyful and chosen	10	29	**39**
Play requires abundance	6	7	**13**
Play reveals aptitudes	16	1	**17**
Total	**32**	**37**	**69**

In the interview data, practitioners' perceptions of play conveyed one shared sense of 'good play,' with individual nuances emerging, rather than distinct inter-relations. The group's learning perceptions painted a different picture.

4.2 Changes in learning perceptions over time

For the learning themes, a progression became evident in the data, ranging from correctness when reproducing knowledge and performing activities, onto learning as applied understanding, and finally, children becoming empowered to cope in life. Perceptions of children's learning in play were mirrored in the first three learning themes: reproduce, perform and understand. Examining the data at the individual level, it became clear how the eight practitioners differed in their espoused learning perceptions. Table 26 shows the number of statements in each learning theme by practitioner, as well as changes over time.

Table 26: Statements on learning perceptions by practitioner

	Reproduction		*Performance*		*Understanding*	*Empowering*
	Visit 1	Visit 2/R	Visit 1	Visit 2/R	Visit 1	Visit 1
P1	4	6				
P2	4	8	1			5
P3	9	17		2		
P4		NA		NA	7	
P5		1		6	5	8
P6		1	18	18		
P7	13	2		3		
P8	5	5	2	2		
Total	**35**	**40**	**21**	**31**	**12**	**13**

Six practitioners had most statements in one theme, rather than spread across themes. Maude (P1), Fikile (P3) and Thembi (P7) had most reproduce statements; Martha (P8) also had most of statements in this theme, combined with some in the performance theme. Liyanda (P6) was firmly anchored in this second performance theme, while Lisa (P4) emphasised learning as children applying lessons taught. For two practitioners, their statements on learning perceptions cut across diverse themes. Anele (P2) highlighted learning as reproducing knowledge and as children being empowered to cope. Finally, Lihle (P5) had statements across three themes: mostly

empowering, but also performance and understanding (see also Figure 21). The prevalence of the four learning themes found at the first visit are illustrated below (Figure 21), as are the two learning themes found at the later visit 2 and revisit combined (Figure 22). From left to right, practitioners are ranked by number of statements per theme, and practitioners are included in all themes, for which they have a minimum of 2 statements; their dominant theme is indicated in bold (e.g., **P1**). Overall, the perception of learning as correctness (i.e. knowledge and performance) was consistently favoured for the group: this is the dominant theme for six practitioners at visit 1, and all practitioners later in the study.

Figure 21: Illustration of learning themes by prevalence (visit 1)

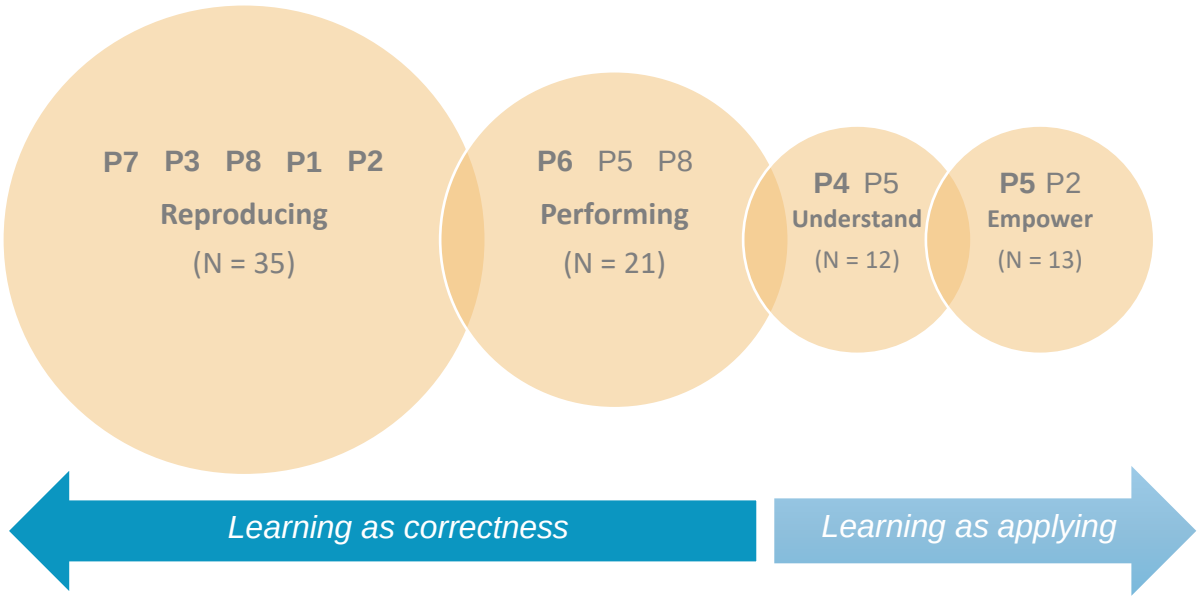
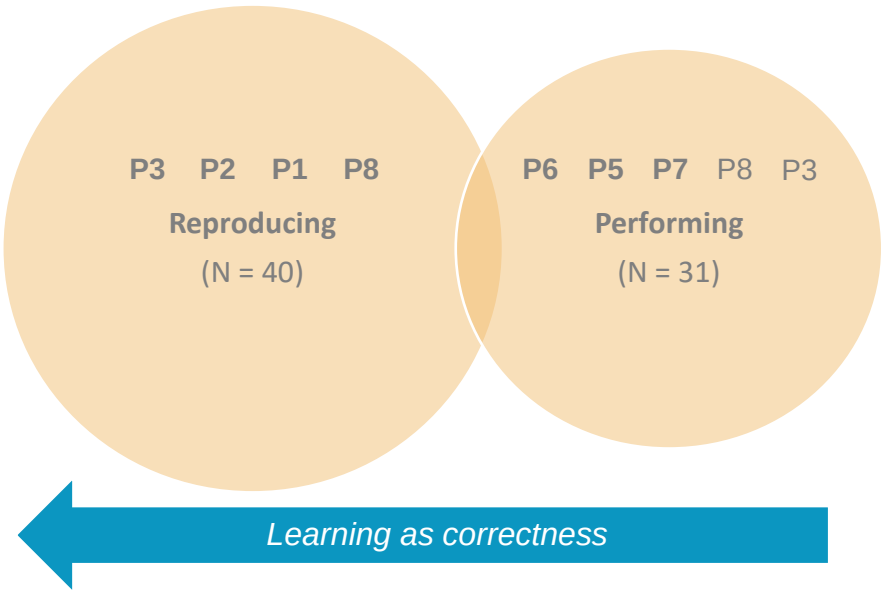


Figure 22: Illustration of learning themes by prevalence (visit 2 / revisit)



From looking at the two illustrations, learning theme statements were not evenly distributed across participants or time points. Statements on learning as reproducing and performance increased slightly in number between the two visits (from 35 to 40, and 21 to 31, respectively). Interestingly, the two smaller learning themes, understanding and empowering children, only occurred in interview data from the first visit. Part of the explanation could be timing of the visits; as the school term progressed, what preoccupied the eight practitioners tended to change: In May and June, when the first classroom visit took place, practitioners had taught their learners since February that year, and grown familiar with them; they also looked towards the South African winter break in late June. In November, classes were approaching the end of term and children were preparing to start first grade. At the revisits in March, practitioners taught a new group of learners, and commented on how these children still needed to settle in. Hence, a link could exist between signs of learning noticed by practitioners and preoccupations driven by circumstances in practice.

4.3 Changes in learning in play perceptions over time

Table 27 shows learning in play perceptions by practitioner with their number of statements indicated for each theme. Statements on learning as reproducing content saw little change (from 15 to 17 statements in total), while those, which focused on performance and understanding, dropped to half (from 27 at visit 1 to 13 at the second and revisit, combined) or one third (from 15 to 3).

Table 27: Learning in play perceptions by practitioner

	Reproduction		*Performance*		*Understanding*	
	Visit 1	**Visit 2/R**	**Visit 1**	**Visit 2/R**	**Visit 1**	**Visit 2/R**
P1			3	1	1	
P2	4		4			
P3		2	2	2		
P4	1	NA	1	NA	4	NA
P5		4	8	1	7	2
P6	5	2	3	5		1
P7	4	2	3	2	3	
P8	3	5	3	2		
Total	**17**	**15**	**27**	**13**	**15**	**3**

From the table above, it is worth noting that practitioners' articulation of play as a learning context was less clear than their take on learning overall. For instance, Lihle (P5), expressed that children could demonstrate learning in play as reproducing academic content, performing play activities according to instruction, and as applying understanding in practice. By contrast, her view of learning centred on children understanding and being empowered to encourage positive change at home. Maude (P1), Anele (P2) and Fikile (P3) commented less on play as a learning context than did their peers. Liyanda (P6), Thembi (P7) and Martha (P8) highlighted children's correct performance in play activities as a sign of learning taking place.

Figure 23 illustrates the most and least prevalent perceptions of children's learning in play at the first visit; practitioners are included in each theme, based on a minimum of 2 statements, and ordered from highest to lowest number of statements (left to right). If applicable, their dominant theme is indicated in bold (e.g., **P1**). For learning in play, one theme came out strongly: performance (N = 27). As seen in Figure 23, visit 1 saw seven practitioners describing signs of children learning in play in terms of performing activities correctly according to instructions or imitating appropriate (adult) behaviour. Only Lisa (P4) preferred learning in play as applying understanding. Lihle (P5) and Maude (P1) had performance as their dominant theme, while Liyanda (P6) and Thembi (P7) mainly saw children's learning in play as reproducing correct answers. Anele (P2) and Martha (P8) both had an even number of statements for reproducing answers and for performance.

Figure 23: Learning in play perceptions by prevalence (visit 1)

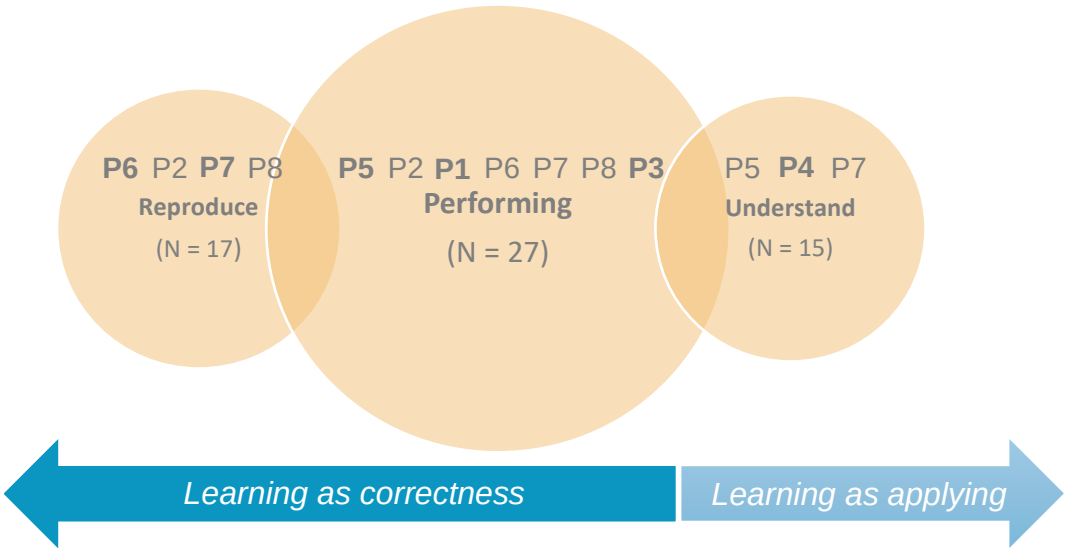
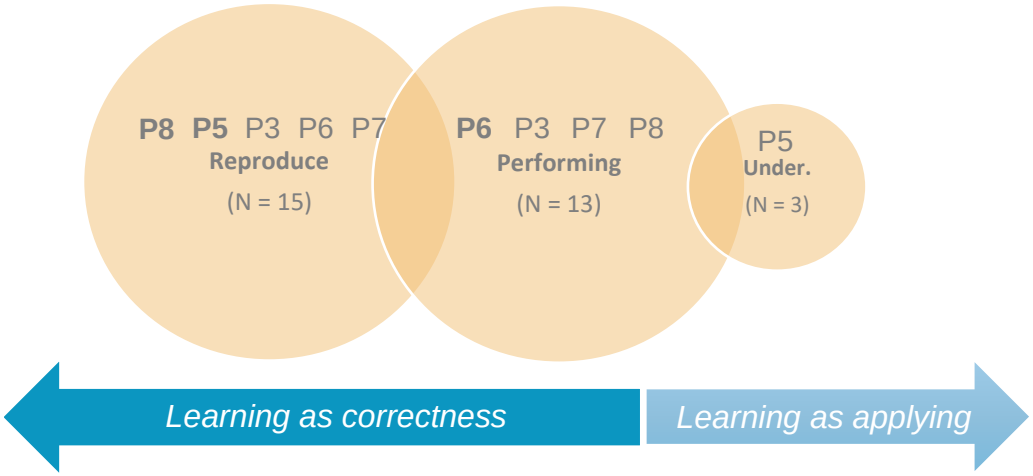


Figure 24: Learning in play perceptions by prevalence (visit 2 / revisit)



Later in the study (visit 2 and revisit), this focus on children's learning in play as performing decreased to 13 statements in total, similar to the number for reproducing knowledge (see Figure 24). Hence, the perception of learning as correct answers and performance remained strong throughout the study, while learning as applying declined sharply; towards study end, Lihle (P5) was the only practitioner representing this theme. At the same time, this practitioner's dominant theme also shifted towards reproducing answers, same as with Martha (P8). Liyanda (P6) continued to prefer learning in play as performing. Fikile (P3) and Thembi (P7) favoured both reproducing and performing, but with no dominant theme. Finally, Maude (P1) and Anele (P2) made no or few references to children's learning in play at their second classroom visit.

4.4 Practitioners' approach to noticing learning in play

Comparing the ways in which practitioners noticed children's efforts in play led to further insights on their individual perceptions. Anele (P2) tended to assume learning to take place by virtue of children being active (i.e., jumping, walking, dancing, or talking) or through being close to more proficient peers: *"This moment when we were saying the alphabet? Yes, it can happen that some are slow at learning the alphabet but through playing, some will eventually know the alphabets well because they say them during the time of playing…"* (Anele, visit 1). Her colleagues attempted to ascertain children's successful learning by posing questions, by observing what a child did more closely and by reflecting on the demands of an activity: *"Because the puzzle, it is not an easy thing to interlock it, but you can see that the child is trying and concentrated here, he wants to do this thing and finish it, as you can see, he is*

left with few pieces." (Maude, visit 2). A second insight concerned the nature of play as a learning context – in other words, how it might spur children's learning. In the two first learning themes, reproducing and performing, children's learning in play was referred to as *demonstrating* curriculum content, language and physical abilities, over practicing and becoming proficient through playing. In the performance theme, practitioners took note of children doing activities correctly and imitating adult roles, such as cooking, going shopping and reading books; imitation was noticed and acknowledged as natural behaviour: *"Yes, because some were books there, you can see, they are imitating the way I usually tell them stories. They also share the story when they are reading books. So, it means they are learning."* (Fikile, visit 2). Hence, when noticing what children did in play activities, practitioners did not look for inspiration to inform their practice with children, including how they might build on children's efforts in play. In the third learning theme, understanding and applying, play was likewise seen as a context for demonstration (i.e., practical application). In this sense, play functioned as a window into children's stage of development, allowing practitioners to track progress and take note of aptitudes; signs of learning meant children's activities related to goals derived from the curriculum, rather than children's self-directed explorations and mastery. Together, this suggested a notion of learning in play as highly adult-defined; children could choose play activities, while their ability to set and pursue goals was less recognised.

5. Conclusions on play and learning perceptions

This section returns to the questionnaire results, comparing practitioners' cluster membership with their play and learning perceptions as per the thematic analyses of interviews. Analysing how practitioners differed in their responses to the perceptions questionnaire resulted in two factors: *Ring time* (F1), featuring activities with language and vocabulary as the learning goal, and *Choice time* (F2), with more child-directed, hands-on activities. Practitioners' perceptions of the nature of child play, as revealed by the thematic analysis (see section 2 in this chapter), chimed well with this notion of children's active and chosen activities as playful; both the *All play* and *Selective* clusters rated these activities more as play. When examining the same means for the eight practitioners across these two clusters, the picture was less clear: Fikile (P3), Martha (P8), and Anele (P2) likewise rated choice time activities more as play, while their peers rated ring time activities higher on play.

As regards learning perceptions, the full *All play* group rated choice time activities slightly higher on academic learning value; the *Selective* group had similar means for both choice and ring time activities. Importantly, the questionnaire specifically asked respondents to rate activities on *academic* learning value. With the thematic analysis of learning perceptions revealing a range from correctness to applied understanding, the question is what meaning respondents assigned to 'learning' when rating activities. Overall, the thematic analysis showed that practitioners favoured correct answers as signs of learning, such as days of the week, colours and numbers (i.e., reproducing academic knowledge), along with performing activities appropriately, either according to instruction or imitating correct (adult) behaviour. This tendency occurred for learning perceptions (though Lisa, Lihle, and Anele did initially highlighted children's understanding and coping as important), and for perceptions of children's learning *in play*; here, all practitioners preferred overt demonstration of academic curriculum content as signs of learning. This suggests a literal and adult-defined take on learning; interestingly, as end of term approached at the second classroom visit, and perhaps since practitioners had new learners at the time of the revisit, emphasis on children's applied understanding and mastery of content and skills taught dropped away in the data. On a final note, despite the pervasive notion of play as child chosen, play's potential as a context for children to practice and progressively master new content and skills, as well as their capacity for setting and pursuing own goals in play, were not generally noticed by the eight practitioners.

5.1 Summary of practitioners' perceptions

The practitioners' cluster memberships and perceptions of learning, including in play, differed across the group. This section presents seven summaries of these results, as captured by the perceptions questionnaire and thematic analysis; these form the first part of the profile matrices for each focal participants in the study (see chapter three, section 6). Colour codes are used to indicate beliefs focused on learning as correctness (blue) and as understanding (orange). In cases where practitioners stated more than one belief, less dominant beliefs are shown in brackets; if beliefs were equally present, this is indicated with a hyphen. The three members of the *Selective* cluster are presented first, followed by four members of the *All play* cluster. Lisa (P4) did not have interview data from later in the study and has been omitted.

Reviewing Table 28, Table 29 and Table 30, and comparing these practitioners' cluster membership (i.e., more cautious ratings for *Ring* and *Choice time* activities) with their initial perceptions, it seems that a focus on learning as correctness, and mostly in terms of reproducing content, is a shared factor for this group.

Table 28: Summary of Maude's educational beliefs

Educational beliefs – Maude		
	Starting point	**End point**
Cluster membership	*Selective* group (lower ratings)	
Learning perceptions	Reproducing	Reproducing (performing)
Learning in play perceptions	Performing	(no statements)

Table 29: Summary of Anele's educational beliefs

Educational beliefs – Anele		
	Starting point	**End point**
Cluster membership	*Selective* group (lower ratings)	-
Learning perceptions	Reproducing (empowering)	Reproducing
Learning in play perceptions	Reproducing – performing	(no statements)

Table 30: Summary of Thembi's educational beliefs

Educational beliefs – Thembi		
	Starting point	**End point**
Cluster membership	*Selective* group (lower ratings)	-
Learning perceptions	Reproducing	Performing
Learning in play perceptions	Reproducing (performing – understanding)	Reproducing – performing

Even so, both Anele and Thembi refer to learning as performance in play, and Thembi further considers understanding as a sign of learning. For members of the *All play* group, Fikile, Lihle, Liyanda, and Martha (see Table 31 to Table 34), their initial perceptions of learning on its own and in play are mixed.

Table 31: Summary of Fikile's educational beliefs

Educational beliefs – Fikile		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Reproducing	Reproducing (performing)
Learning in play perceptions	Performing	Reproducing - performing

Table 32: Summary of Lihle's educational beliefs

Educational beliefs – Lihle		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Empowering (understanding – performing)	Performing
Learning in play perceptions	Performing (understanding)	Reproducing (understanding)

Table 33: Summary of Liyanda's educational beliefs

Educational beliefs – Liyanda		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Performing	Performing
Learning in play perceptions	Reproducing (performing)	Performing (reproducing)

Table 34: Summary of Martha's educational beliefs

Educational beliefs – Martha		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Reproducing (performing)	Reproducing (performing)
Learning in play perceptions	Reproducing - performing	Reproducing (performing)

Fikile emphasises a passive child role of giving correct answers, and prefers performing correctly in play as a sign of learning. Her three peers in the *All play* group, on the other hand, appear to view children in a more active learner role, taking a position between correctness and applying understanding: Liyanda and Martha

both recognise performing as a sign of learning overall; Martha sees performing as a sign of learning in general and in play, and in her initial perceptions, Lihle offers the strongest example of learning as applying and even empowering children. As time progresses, however, all practitioners shift towards correctness as the most important sign of learning. The next section presents results from the thematic analysis on teaching conceptions, where relations between children and practitioners, and their roles in the learning encounter, come out even clearer.

6. Conceptions of teaching

In this section, results are presented from the thematic analyses of 249 statements from the interview data, which referred to practitioners' views on children as learners and their own role as educators, including in play. From patterns in the practitioners' views on children as learners, it became clear that these views preceded their own educator role: children's (in)capacity for directing own actions largely dictated how they themselves needed to frame tasks and respond to children.

6.1 Conceptions of children as learners

In the thematic analysis of practitioner statements on children as learners, a strong theme highlighted their immaturity, impulsivity and dependence on the educator as a more capable adult; in a second and smaller theme, children were seen as intentional and reasoned in thoughts and actions (see Table 35).

Table 35: No. of statements by learner theme

Learner themes	No. of statements
Children as immature	97
Children as reasoned	15

6.1.1 Theme one - children are immature, impulsive and dependant

With a total of 97 statements, this was a predominant theme in the interview data with many facets. Comments on practice successes with children attending to and complying with instructions did occur in this theme, but most centred on learners being young and immature, and how this immaturity would 'bubble' up – almost like a natural force – to disrupt the established order of the classroom:

"It felt good to me when children were listening to me and not causing chaos because it is difficult to control a class of young children. Because if one does something wrong, they all do." (Anele, visit 1).

"What I was thinking is that, since I am asking them 'why is family important?,' I will get some answers that are irrelevant and some just give you the correct answer. But you worry, maybe my friends are going to disappoint me, I hope they don't disappoint me, in your heart, you wish they can give you the correct answer, but you also have to remember that they are just children." (Maude, visit 2).

"(…) These two are chasing each other. The other one wants to take the guitar from the other one. What comes to my mind is that it looks like I have to improvise and make another guitar, so that they don't fight over this one guitar." (Lihle, visit 1).

From the practitioners' own perspective, their young learners caused chaos, were easily distracted, doing 'their own thing' and monopolised the practitioner. These descriptions held a sense of inevitability with practitioners trying to 'contain' the consequences of children's immaturity; statements shared a notion of children's actions being governed by impulses; they did what they liked and wanted, occasionally asserting themselves, resisting norms and adult authority:

"(…) when I try to move to other areas, they follow me and show me what they have done. Once I move away, they come after me. In my mind, I had that it means they want me to pay attention to them only, which is something that cannot happen because in the end I have to pay attention to them all and support all of them in what they are doing." (Thembi, visit 2).

"He interrupted me because my class was listening attentively and he, out of the blue, started eating his shoes, even though he was listening because he was the only one who told me what call Christmas day." (Anele, visit 2).

"Here, I was thinking that because this is what we have learned about before, I was thinking that maybe if I ask questions, they will be that we have done this before. Because they say that sometimes, they will tell you 'no, miss, we have done that before' and they will not respond to the questions." (Maude, visit 1).

Practitioners repeatedly pointed to children's needs and wants as the root of action, over intention and rational motives: craving attention, wanting to demonstrate

accomplishments to the practitioner and not to peers, imitating other children or the practitioner. That being so, children relied on adult patience and support, and on practitioners instilling appropriate behaviours. Practitioners felt they had to stem the tide of children's innate traits; for instance, that children were 'just born' selfish, wanting more toys for themselves than they needed, which was typically addressed by removing a desired toy, or by having enough toys for all. Sometimes, children's actions were unaccountable (i.e., chewing shoes). In these ways, interpretations of what children did were couched in terms of youth, impulse and dependence.

6.1.2 Theme two - children are intentional and reasoned

With 15 statements, a less dominant theme was viewing children as intentional learners. Here, greater attention was paid to child actions, with practitioners searching for and assigning meaning to what children were doing in class:

"I was feeling happy because some, I can see that they can build and when I ask them questions, they can explain. Even though some chose to build on their own, it means they want to explain alone, but I can see that they are following, even though there are those, who are still left behind, they need to start working with others." (Liyanda, visit 1)

"I can say, I remember here that I had a little confusion. There is a child who said, 'water is nice.' Yes, water is nice but to me, it was like in my mind, I wanted them to mention how water tastes like the ocean water, it's salty. It means, the child said water is nice, there was that confusion and I felt like the child was wrong. But I realised later that the child is correct; yes, water is nice, if it's not diluted with anything that makes it change (…)." (Lisa, visit 1).

"Another thing that came to my mind was that, if a child is either learning or playing, the developmental areas must show in the child individual. Social, emotional, cognitive and language, that should all show. That is why, if I have been talking to the child and they ask to change, I have to allow them to go play in another area, because there is something that came to them, it's that, now they want to see if they can do something that they once struggled to do. So, they are going to try there, because the other thing, they have managed to do that well." (Lihle, visit 1).

The excerpts above exemplify how practitioners sometimes assumed intention on the part of the children, reflected on classroom events to grasp children's meanings and actively engaged with them to understand their perspective. This emphasis on child intentionality set the theme apart from the predominant conception of children as

immature and governed by impulses. Importantly, as Lihle's statement indicates (i.e., 'I have to allow them to go play in another area'), practitioners still considered young children in need of guidance, while recognising children's capacity for reasoned action and for helping peers, rather than adults offering the only valid assistance.

6.2 Conceptions of educator roles

The strongest theme to emerge on practitioners' conceptions of being educators matched the immature learner role: being a font-of-knowledge in charge. The second theme focused on the educator's role to manage and supervise children's play. In the third and final theme, relations between children and practitioners shifted, emphasising greater mutuality and a facilitating role.

Table 36: No. of statements by educator theme

Educator themes	No. of statements
Font-of-knowledge	57
Play manager	61
Facilitator	19

6.2.1 Theme one – being a font-of-knowledge in charge

Like the theme on children being immature learners, the concept of practitioners as fonts-of-knowledge came out strongly in the interview data with 57 statements. These highlighted the role of a knowledgeable authority, where the practitioner was responsible for leading children in activities, teaching them the curriculum, as well as norms for appropriate behaviour, checking and correcting their efforts:

"At this moment, what's on my mind is, I am thinking that if I'm done, what's the next thing to do? How much time do I need? What do I want to achieve? Even if I don't achieve it, but make sure that all the children are busy, and their minds are kept busy." (Martha, visit 1).

"Here, I'm helping Philip so he can sort according to the colours that I asked them to." (Liyanda, visit 2).

"I was thinking that we have to tell them about animals that live in the water but some things, you can see clearly that you also don't know what they eat but have to pass on the

information to the kids. Yes, I had that the aquatic frog, I don't know very well myself, but I have to tell the kids about it." (Thembi, visit 1).

"What was on my mind here, was that children, even if I ask them questions, I won't get relevant answers. Like I said before, that the ash, they don't even know what it is. Even though they were able to answer here and there, but I was well aware that answers that I will get here, I will get incorrect answers. Only two or three will try and that's exactly what happened." (Maude, visit 1).

As these excerpts illustrate, a key feature of the font-of-knowledge theme was a hierarchical relation between the practitioner and learners, with the adult at the centre – *what I want to achieve*, *as I asked them to* and *I won't get relevant answers* and *I have to tell them*. In most cases, this hierarchy merely appeared a taken-for-granted position: Since children could not know any better (i.e., being young and immature), the practitioner should instruct them. But in a few cases, the skewed relation was very marked. Here, children were instead described as out of line – 'disrupting' or 'disorderly' – with the practitioner having to assert authority:

"She was distracting me, she is not concentrating, she is playing while we are learning, so I was disciplining her." (Fikile, visit 2).

Occasionally, practitioner statements about the role of being a knowledgeable authority in charge revealed conflicting concerns – typically, a sense of responsibility mingled with attention paid to children's motivation and welfare:

"I was aware that I will get answers that are irrelevant. You ask a question, and someone gives you an answer that is not right, but you have to, as a practitioner, you have to be supportive all the time and help the children. Because sometimes, they give you an answer that is close to the answers, but they are not addressing it appropriately. You have to advise, say something, but they shouldn't see that the answer they give is incorrect because they are very sensitive." (Maude, visit 2).

"What is on my mind is that I have visited all areas that the groups are in, I'm thinking this is the last one. When I get to them, oh, they didn't write what I wanted. But I have to be supportive to them and give them love, even though I can see the child is doubting 'this is not what she wanted.' But I give them love." (Martha, visit 1).

As noted with these two excerpts, the font-of-knowledge role included overseeing and supporting children's efforts, keeping them comfortable and motivated to do activities. Even so, success for this role was signified by an orderly classroom: that children were attentive, kept busy with tasks and complying with instructions and norms for appropriate behaviour.

6.2.2 Theme two – being a manager of children's play

Being an overseeing and supportive practitioner extended to play activities. This was captured by a second strong theme, which comprised 61 statements that pointed to a role of supervising children during free choice time. Like the font-of-knowledge, much of this role was about keeping order in class, managing time and children's activities. Where the role differed was in practitioners both accommodating children's preferences and their own position of authority. This was done through creating space and time for child-chosen play, by moving about and stepping in when needed:

"In this moment, sitting here at the creative area, I was trying to help those who are drawing, pasting. Those who are drawing whatever they like, and I help them." (Fikile, visit 2).

"What was on my mind is that all of them, I was hoping that where the children chose to go, they are comfortable and have enough material in that area. What made me confused is that others, when they go there and the materials are not enough, what am I going to do? But I have to, when I go to them and make them feel welcomed in the area that they chose." (Martha, visit 1).

"I am doing this so that the learners know how to use the paint and that if you're painting, you paint in the middle not on the sides, as when you're given a circle or triangle, you don't paint outside the circle or triangle, you only paint inside what is given." (Liyanda, visit 1).

"I was supervising children, asking, because you have to ask them 'what are they doing?' While interlocking the bricks, what are they thinking? They will respond and tell you what they are doing, and you will find that very nice." (Anele, visit 2).

The interview excerpts above illustrate the play manager role of assisting children by ensuring that materials were used as intended and with due care, helping them to complete activities and showing interest or approval by asking questions. Support also meant a more involved role of resolving conflicts between children:

"So, normally I put it aside, because they all end up wanting it because it is different from other dolls." (Liyanda, visit 2).

"…even if they are mixing, a person is playing with books at the same time as playing with puzzles, you can advise a child. I felt like an advisor, actually, here. The child shouldn't play with the book and hold puzzle pieces at the same time. The one who is playing with puzzles only, how is s/he going to put the puzzle together without all the pieces? You are holding a book and a puzzle. I think I was a problem solver here." (Maude, visit 1).

Practitioners expressed enjoying this role of play manager, feeling confident and confirmed through a sense of their responsibility as supervisor and arbiter in play activities, and through recognising children's choices and likings in play. At the same time, this role held anxiety and confusion – what happens if children choose an area where there are not enough materials? If they are left unattended for a moment, will the classroom disrupt into chaos? This precarious educator position was not found in the third and final theme on practitioner conceptions of teaching roles.

6.2.3 Theme three – being a facilitator of children's engagement

Comprising 19 statements, this theme of practitioners facilitating children's engagement was small but distinct from its font-of-knowledge counterpart. By modelling and by linking lessons to children's own understanding, practitioners sought to engage and motivate. This approach also helped to set expectations for children to actively take part, as well as for how to behave in activities:

"I feel good, I started by checking, because I started with observing them to, if they are doing this thing. And I see that they are not doing so well, so I had to join them and be at their level, you see, so that they can also enjoy, even though my knees are painful, but it's nice, because we are dramatizing (…)" (Anele, visit 1).

"Another thing is that children, if you play with them, they are free and comfortable instead of saying 'play' to children and then you just stand on the side. If you say that children must do something, you have to do it with them, so that they can be happy and see that what they are doing is something good. So that, if you discipline them if they do something inappropriate, they can see that 'no, this is not right.' They can call themselves back to order and play well with other children." (Lihle, visit 1).

"Another thing which came up was colours, because if you are teaching that lesson, you must incorporate many things if possible, like shapes, those things if they come up. And a person must be able to do things. Here, there was a time, when I was talking to Sani, someone responded, and I stopped them because I wanted each person to know what they did themselves and be proud of what they were able to do." (Lisa, visit 1).

In short, this theme described a more mutual relation between children and the practitioner that placed emphasis on child engagement. Here, an important aspect was the practitioner leading by example, as underscored with the two first excerpts. When participation and good behaviour is modelled, along with the practitioner pointing out what children are not meant to do, they can learn to recognise appropriate ways of acting (i.e., 'call themselves back to order'). Engagement and enjoyment counted for practitioners too in this theme, as did easy communication between children and practitioners:

"I was feeling free because everything that we are doing was freedom and happiness. So, they were cooperating, and we were all doing it together. I wasn't instructing what to do next, but I was doing it with them, so they can feel comfortable." (Lihle visit 2)

"I am happy, because I like that, to make them feel like, isn't it, maybe, the time when they were listening to the story, they have to concentrate, but here, everyone is free, and I have to be free with them." (Anele, visit 1)

Statements in this theme tended to highlight a positive classroom atmosphere. While learning, children should feel free, actively take part and enjoy doing so. Participation was referred to as chosen by children, and the facilitating practitioner sought to excite by changing the pace in activities, for instance shifting between movements and songs. A less clear aspect was practitioners facilitating children's understanding, though it did occur (see Lisa's excerpt).

6.3 Practitioner teaching conceptions and changes over time

The thematic analyses described above found patterns across all eight practitioners' conceptions of child and educator roles. Reviewing how each practitioner articulated their own and children's role, revealed two subgroups. In the first group, two themes overlapped: children as immature and the educator role of being a font-of-knowledge role. The second subgroup included practitioners, who described a more mutual

relation, with children generally viewed as capable. Table 37 below presents an overview of statements by practitioner and over time, showing that these three themes on teaching conceptions were by far the strongest: *Children as immature*, the educator role of being a *Font-of-Knowledge* and a *Play manager*. In the two first themes, Lisa (P4) and Lihle (P5) seem to have fewer statements. This picture is mirrored in the two mutual themes: *Children as reasoned*, and the educator role of being a *Facilitator*: Lihle (P5) has several statements in these themes, even over time, as does Lisa (P4) and Anele (P2). Liyanda (P6) has one statement on children as reasoned and none on the facilitator role. For *Play manager*, all practitioners were represented apart from Lisa (P4).

Table 37: Statements on learner and educator themes from visit 1 to 2 (and revisit)

	Children as immature		***Font-of-knowledge***		***Children as reasoned***		***Facilitator***		***Play manager***	
	V1	**V2/R**	**V1**	**V2/R**	**V1**	**V2/R**	**V1**	**V2/R**	**V1**	**V2/R**
P1	9	12	8	7					7	3
P2	4	9	3	6	1		8		1	9
P3	2	2	7	2					3	4
P4		NA	1	NA	4	NA	2	NA		NA
P5	5			2	4	5	4	5	2	5
P6	8	16	2	3	1				7	8
P7	14	13	5	2					2	4
P8	2	1	6	3					6	3
Total	**44**	**53**	**32**	**25**	**10**	**5**	**14**	**5**	**28**	**36**

Shown with bar graphs on the next page, these subgroups stand out more strongly: Figure 25 and Figure 26 indicate each practitioner (P1-P8, x-axis) with the total number of statements per practitioner indicated on the y-axis. In Figure 25, Anele (P2), Lisa (P4) and Lihle (P5) all have colour combinations that indicate the *Facilitator* role, together with *Children as reasoned* initially in the study. The remaining five practitioners have combinations highlighting a hierarchical relation between learners and educators (i.e., *Children as immature* and the *Font-of-knowledge* role).

The *Play manager* role is ubiquitous. Later in the study, six out of seven practitioners have combinations of educator and learner roles that underscore hierarchical relations between adults and children; only Lihle (P5) continues to emphasise a more mutual relation (see Figure 26).

Figure 25: Teaching theme combinations at visit 1

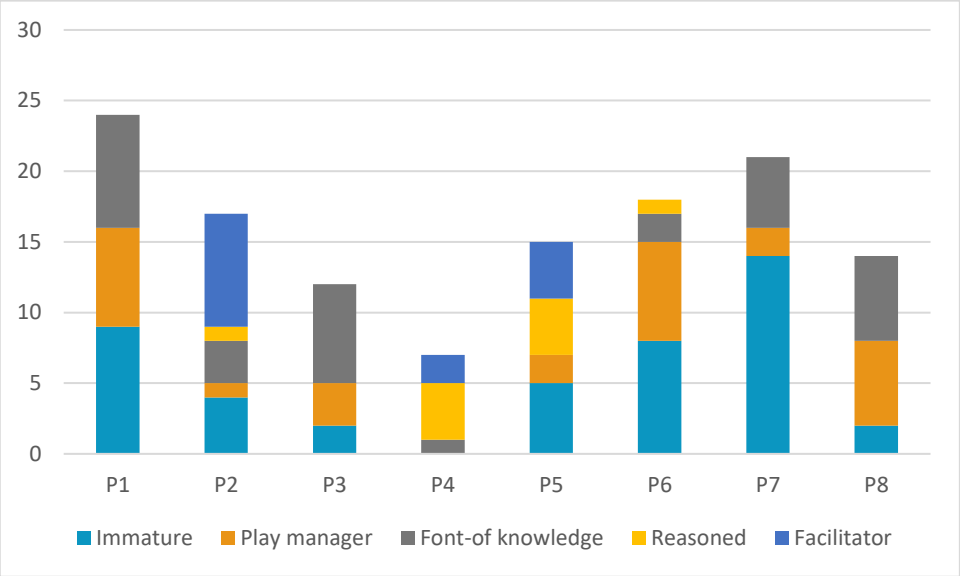
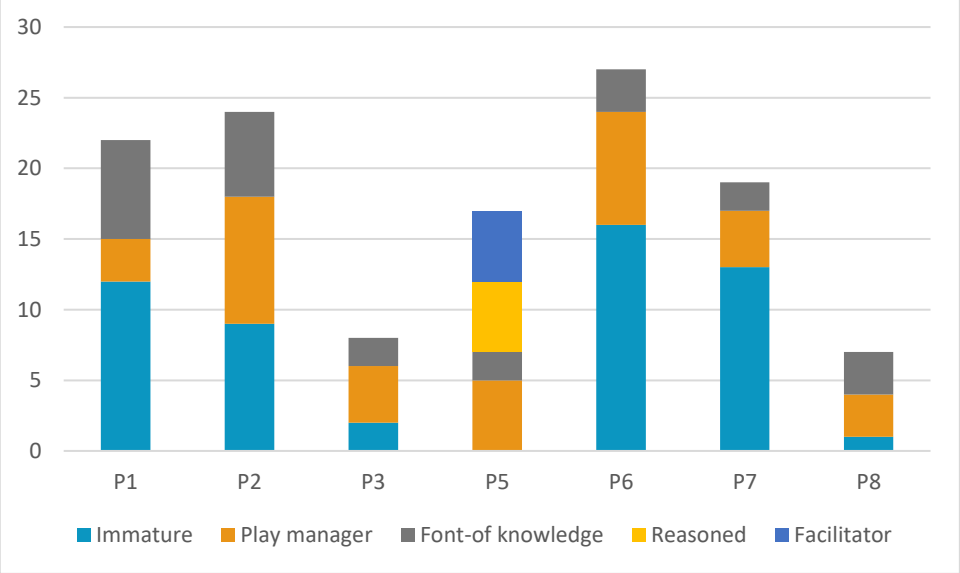


Figure 26: Teaching theme combinations at visit 2 and revisit combined



6.4 Summary of practitioners' educational beliefs

From Table 38 to Table 44 in this section, summaries are given for seven practitioners' educational beliefs: perceptions of learning, learning in play, conceptions of children and educator roles. The tables include their starting points, as captured by the perceptions questionnaire and interviews conducted at the first visit, along with their educational beliefs later in the study (visit 2 and revisits). Looking across the summaries, five practitioners emphasised learning as correctness (reproducing and performing) over children understanding. This coincided with a preference for the *Font-of-knowledge* role and viewing children as more immature: Maude, Fikile, Liyanda, Thembi and Martha.

Two in the group stand out by having some elements of viewing the practitioner as a facilitator and children as reasoned: Anele and Lihle. Importantly, practitioners describing themselves in font-of-knowledge terms, vis-à-vis facilitator terms, did not correspond with their membership of the *Selective* and *All play* group. Early in the study, Anele's beliefs about learning, including in play, her own and children's role in practice are divergent: she mostly describes children as immature and relying on her guidance, and yet sometimes recognises their intentional behaviour (i.e., children seen as reasoned); her own role is to facilitate and support children, even empower them to cope, but also to act in accordance with her position as a more knowledgeable authority. Later on, Anele prefers learning as reproducing, just as her view of educator and learner roles revert fully to hierarchical beliefs.

Table 38: Expanded summary of Maude's educational beliefs

	Starting point	End point
Cluster membership	*Selective* group (lower ratings)	-
Learning perceptions	Reproducing	Reproducing (performing)
Learning in play perceptions	Performing	(no statements)
Teaching role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature

Table 39: Expanded summary of Anele's educational beliefs

	Starting point	End point
Cluster membership	*Selective* group (lower ratings)	-
Learning perceptions	Reproducing (empowering)	Reproducing
Learning in play perceptions	Reproducing / performing	(no statements)
Teaching role conception	Facilitator (occasionally Font-of-knowledge)	Font-of-knowledge
Learner role Conception	Children as immature (occasionally reasoned)	Children as immature

Table 40: Expanded summary of Fikile's educational beliefs

	Starting point	End point
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Reproducing	Reproducing (performing)
Learning in play perceptions	Performing	Reproducing – performing
Teaching role conception	Font-of-knowledge	Font-of-knowledge
Learner role Conception	Children as immature	Children as immature

Table 41: Expanded summary of Lihle's educational beliefs

	Starting point	End point
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Empowering (understanding – performing)	Performing
Learning in play perceptions	Performing (understanding)	Reproducing (understanding)
Teaching role conception	Facilitator	Facilitator (occasionally Font-of-knowledge)
Learner role Conception	Children as immature (and as reasoned)	Children as reasoned

Table 42: Expanded summary of Liyanda's educational beliefs

	Starting point	End point
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Performing	Performing
Learning in play perceptions	Reproducing (performing)	Performing (reproducing)
Teaching role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature (occasionally reasoned)	Children as immature

Table 43: Expanded summary of Thembi's educational beliefs

	Starting point	End point
Cluster membership	*Selective* group (lower ratings)	-
Learning perceptions	Reproducing	Performing
Learning in play perceptions	Reproducing (performing – understanding)	Reproducing – performing
Teaching role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature

Table 44: Expanded summary of Martha's educational beliefs

	Starting point	End point
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Reproducing (performing)	Reproducing (performing)
Learning in play perceptions	Reproducing - performing	Reproducing (performing)
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature

Lihle's educational beliefs were also mixed, though not as divergently as in Anele's case. In terms of children's role, her starting point emphasised their immaturity together with reasoned thoughts and actions; she articulated signs and goals of learning as children being empowered and affecting positive changes at home; in play, her learning focus shifted to performing, together with children understanding.

Lihle was most clear in her articulation of mutual relations with learners, and consequent educator role as a facilitator. Towards study end, Lihle's beliefs about children as reasoned appeared stronger, and yet her role was now also to be a *Font-of-knowledge*, together with greater emphasis placed on learning as correctness.

7. Practitioners' sense of teaching efficacy

Results on practitioners' efficacy refer to how they judged their overall efficacy for teaching learners in their working context (i.e., initial efficacy in the change model), and how much they felt able to teach the curriculum through play (i.e., ongoing efficacy in the model). Results from the efficacy questionnaire are presented first, followed by findings on reflective task responses.

7.1 Results from the teaching efficacy questionnaire

Preliminary analysis of responses to the efficacy questionnaire led to a final scale with 8 items (see section 3.3 in chapter three) and high internal reliability (Cronbach's alpha = .70). This scale combined broad aspects of teaching, including four items on classroom management (A1, A9, A7 and A14, e.g., 'I am able to get learners to follow classroom rules'), three items on collaborating with parents and fellow practitioners (A3, A10, and A12, e.g., 'I can assist families in helping their children do well in my class') and one item on gauging child learning (A4, 'I can accurately see if learners understand what I teach'). Using this scale as a measure of practitioners' initial efficacy for teaching, three in the group had lower scores compared to their peers: Anele (P2) and Thembi (P7) both had a score of 4.6 out of 6, while Maude (P1) was slightly higher at 4.8 on initial teaching efficacy. The remaining five practitioners all had higher initial teaching efficacy scores: 5.3 (Lisa, P4), 5.4 (Fikile, P3; Lihle, P5; Martha, P8), and 5.5 as the highest score (Liyanda, P6).

7.2 Results from the reflective tasks

The analysis of reflective task responses reviewed practitioners' efficacy ratings along with reasons given for this number. Following in-depth analysis (see chapter three, section 4.3), three groups of reasons emerged: *teaching strategies*, *assumptions* and *vocation.* Summaries of main reasons given by each practitioner are presented below, together with their efficacy ratings at time points 1 and 2, where data was available (see Table 45). The most common group of reasons informing practitioners' efficacy scores was *teaching strategies*. These ranged from ways of

keeping children occupied with play materials during busy times (P2: *'I would provide the children with 6 bricks, blocks and cars to keep them busy while I'm filling in a form'*) to giving play activities related to the curriculum theme (Maude: *'I can give them a task of drawing families'*). Another group of reasons referred to *vocation* or professional commitment (Martha: *'I love my work and children'* and Thembi: *'I am trained to do it'*). *Assumptions* about play as a learning context formed a final and interesting group of reasons that underpinned efficacy ratings. This came out in two ways. First, with learning seen as inherent to play (Liyanda: *'Play is the way children learn better'*) and second, with play being motivating (Lihle: *'Playing while learning makes children all happy to learn'*).

Table 45: Overview of efficacy scores and condensed, main reasons

Participant	Time 1		Time 2	
	Efficacy rating	Main reasons	Efficacy rating	Main reasons
P1 Maude	-	-	-	*Strategies* (give play task related to curriculum theme, e.g., drawing family)
P2 Anele	-	-	5	*Strategies* (occupy children with play materials related to the curriculum, e.g. transport)
P3 Fikile	5	*Assumption* (play is learning) *Strategies* (learn about trains by imitating a train in play)	5	*Strategies* (organise in groups, give play activity, incentivise good behaviour)
P4 Lisa	5	*Strategies* (organise group work, give play suggestions – i.e., boys can hold doll).	4	*Issues* (children fight over toys, lack of staff), *Strategies* (give educational game)
P5 Lihle	6	*Strategies* (promote learning in play by aligning lessons and play practices)	5	*Strategies* (plan activities related to daily theme, delegate and enlist help)
P6 Liyanda	5	*Assumption* (looks like play but is in fact learning, play helps child understanding)	4	*Issues* (disturbance, child needs help), *Strategies* (follow daily programme)
P7 Thembi	5	*Strategies* (children assist / work independently) and *Vocation* (trained to do it)	4	*Strategies* (occupy children with toys, supervise), *Issues* (lack of time to observe)
P8 Martha	6	*Vocation* (love of work and children), *motivate children* though skill and affection	5	*Strategies* (play materials, use daily programme, group work), *vocation* (give care)

Overall, Table 45 shows high efficacy scores at both time points, signifying that practitioners agreed or highly agreed that they can teach the curriculum through play, even when busy. In four cases, scores dropped by one between time point 1 and 2: Lisa (P4), Liyanda (P6) and Thembi (P7) went from agreeing to agreeing a little, and this decrease in efficacy scores corresponded with issues stated by these practitioners; Martha (P8) went from highly agreeing to agreeing with the prompt, and teaching strategies emerged among her reasons. Fikile (P3) and Lihle (P5) retained their high sense of efficacy for teaching the curriculum through play, and their ratings were mostly informed by teaching strategies. A final point to make is the change in strategies given by the eight practitioners. In the second reflective task, more and varied strategies were listed by four of the six practitioners who submitted two responses (Fikile, P3; Lihle, P5; Thembi, P7 and Martha, P8).

7.3 Conclusions of practitioners' teaching efficacy

On initial efficacy for teaching, Maude (P1), Anele (P2), and Thembi (P7) all had relatively low scores (4.6 and 4.8 out of 6). Five of the eight practitioners had initial efficacy scores above five: 5.3 (Lisa, P4), 5.4 (Fikile, P3; Lihle, P5; Martha, P8), and 5.5 (Liyanda, P6). At first, this grouping of practitioners seemed to resonate with the profiles of play and learning perceptions (see section 1.3 in this chapter) though further analysis revealed no significant correlations between practitioner efficacy scores and either cluster membership or the two groups' mean scores for play and learning ratings. Patterns of lower and higher efficacy did align with practitioners' responses to the reflective task. Though her ratings dropped from highly agreeing to agreeing with the task prompt of teaching the curriculum through play, Martha (P8) still had a high sense of teaching efficacy. Fikile (P3) and Lihle (P5), likewise continued with relatively high efficacy for play-based practices. The case was different for Lisa (P4), Liyanda (P6) and Thembi (P7); their sense of efficacy for teaching through play decreased, just as these practitioners noted issues.

8. Practitioners' reflective orientation

This section presents results on reflective orientations, based on the analysis of 276 statements from fifteen interviews, and fourteen written responses to the reflective tasks. First, the percentage of each orientation, as coded in the interviews, is indicated for each practitioner, comparing results from early and later in the study. Findings, based on the reflective task, are presented towards the end of this section.

8.1 The three reflective orientations

Figure 27 shows the distribution of the three reflective orientations, performance orientation (PO), meaning orientation (MO) and struggling orientation (SO) for each practitioner as coded in the first round of interviews. Percentages are given based on the number of total statements included in the analysis (e.g., 23 statements included in the analysis, of which 20 were PO, 3 MO and none SO).

Figure 27: Distribution (%) of orientations PO, MO and SO (Visit 1)

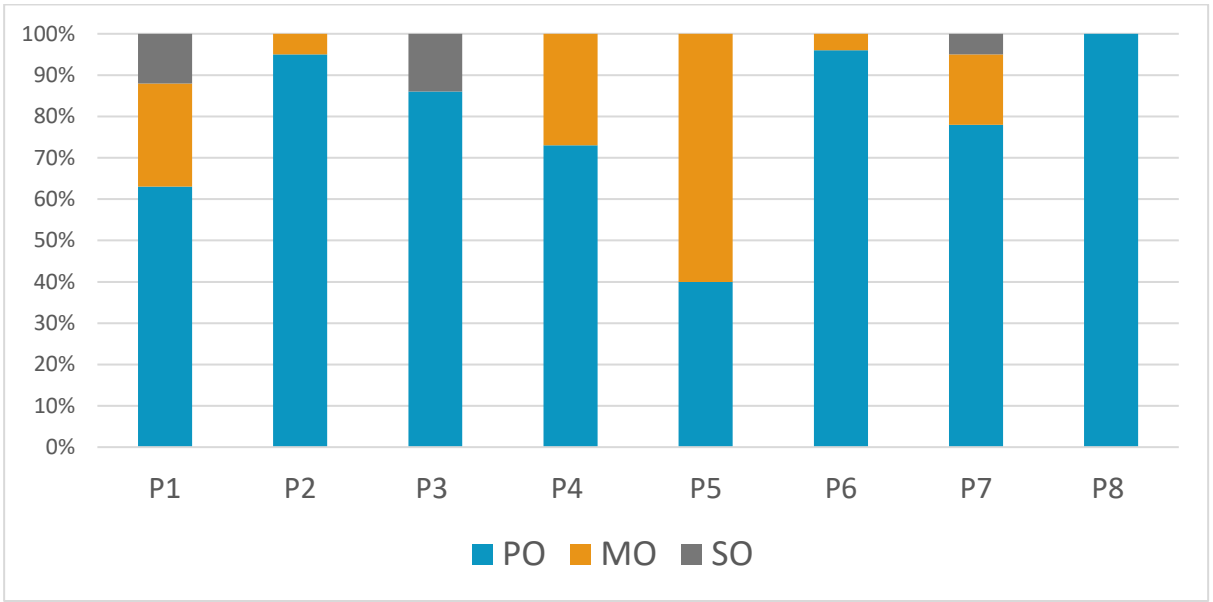
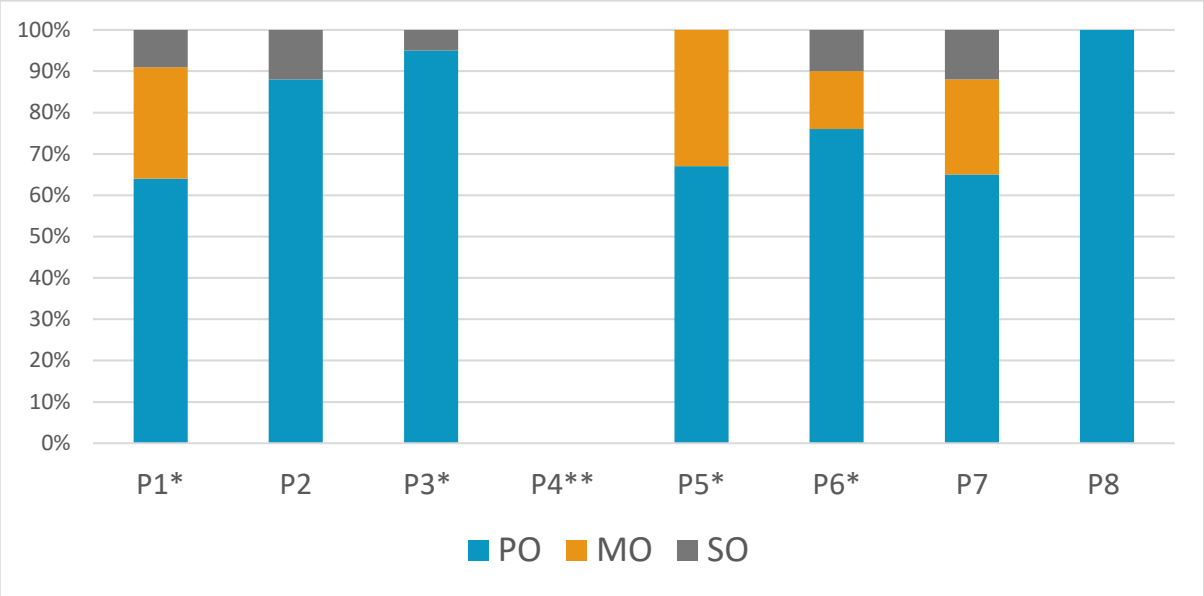


Figure 28 shows the distribution of each reflective orientation – PO, MO and SO – by practitioner, as coded for a second interview: either at classroom visit number two or at the revisit (indicated with an asterisk* in the figure; since Lisa, P4, had no second interview, the figure is blank above her indicator).

Figure 28: Distribution (%) of orientations PO, MO and SO (Visit 2 / Revisit)



*Results based on data from the revisit

**Interview data missing (see Methodology section 1.5.1)

Looking at both figures, the practitioners mainly focused on performance in the interviews: typically, this meant stating teaching goals and intentions, and judging how well they were doing in terms of realising goals. They also made comments about children's performance – what they ought to do or learn, and how well children met expectations in the classroom. Martha (P8) was a clear example of this orientation, having exclusively performance-oriented statements at both time points. Maude (P1), Lisa (P4), Lihle (P5), and to some extent Thembi (P7) showed the highest tendencies towards meaning-orientated reflections, although Anele (P2) and Liyanda (P6) had a few (see Figure 27). At the first visit, instances of struggling statements were rare, and only found for Maude (P1), Fikile (P3) and Thembi (P7). Later in the study, Lihle (P5) was still among the highest percentage of meaning-oriented statements, together with Maude (P1). Liyanda (P6) and Thembi (P7) also had indications of meaning orientation. More interesting, perhaps, was the shift in struggling statements: At the second visit (and revisit), five out of seven practitioners had instances of struggling-orientation: Maude, Anele, Fikile, Liyanda and Thembi. These practitioners focused more on difficulties, in particular, that learners were not doing as they ought or not capable of following instructions. Hence, the struggling orientation underscored a sense of avoidance.

Above all, the coding and analysis of reflective orientations showed that performance orientation prevailed, but that most practitioners had a mix of orientations, meaning-oriented statements occurred for six out of eight practitioners at the first visit, and four out of seven later in the study. Finally, instances of struggling statements became more prominent over time.

8.1.1 Reflective orientations from task responses

To further validate practitioners' reflective orientations, the 14 written responses to the task on efficacy for teaching the curriculum through play were also coded. As noted earlier, these responses were short, and little variation occurred from this secondary data coding (see Table 46). With most responses coded as performance orientation (PO), these results matched that of the interview coding, overall. One practitioner, Lihle, gave some underlying reasons for her teaching through play approach in the first task response (i.e., meaning orientation, MO). She explained her strategy of aligning lessons and play activities, offering examples of how she and the learners asked similar questions in both practices, and then gave this reason: "…so that we can understand what we are learning better." (Lihle, reflective task 1).

Table 46: Reflective orientations from task responses

Participant	Time 1	Time 2
P1 Maude	-	PO
P2 Anele	-	PO
P3 Fikile	PO	PO
P4 Lisa	PO	PO / SO
P5 Lihle	PO / MO	PO
P6 Liyanda	PO	PO
P7 Thembi	PO	PO / SO
P8 Martha	PO	PO

Two responses to the second task noted a fault or lack in children together with a teaching strategy, which indicated a more struggling orientation (SO): *"I usually give children toys so they can play, so they don't interrupt me."* (Thembi P7, reflective task response 2) and *"…the others would take toys away from others or fight."* (Lisa P4, reflective task response 2).

The remainder had a focus on teaching performance (i.e., what practitioners could or should do), without explicitly considering intentions and reasons, why their examples would work, or why children would act or learn in the manner described.

8.2 Conclusion on reflective orientations

Across the two data sources, video-stimulated recall interviews and the reflective task, participants had instances of all three reflective orientations: performance, meaning and struggling, with the first performance orientation dominating. Over time, similar shifts were observed for both data sources: more instances of struggling occurred, just as the percentage of statements coded as meaning-oriented diminished for the group overall. In terms of individual reflective approaches, Martha was a clear case of performance-orientation; Maude, Lisa and Lihle offered the clearest examples of meaning-orientation, followed by some instances observed for Thembi, Anele and Liyanda. Only Fikile and Martha had no statements coded as meaning-orientation. On the other hand, Fikile had a relatively high percentage of struggling statements, especially for the first visit. Both Maude and Thembi showed mixed orientations at the two time points, as did Liyanda at the second time point.

9. Chapter conclusions

The study's first research question concerned constructs identified as central to the change model, and how these changed over time: educational beliefs, teaching efficacy and reflective orientation. This section includes summaries of findings for Maude, Anele, Fikile, Lihle, Liyanda, Thembi and Martha. Reflections on practitioners' educational beliefs were presented earlier (see section 6.4 in the chapter). In Table 47 to Table 53, summaries now include efficacy scores along with each practitioners' dominant reflective approach at start and end of the study. In order to compare efficacy scores from the questionnaire with the reflective tasks (see section 2.6 in the methodology chapter), ratings above 5 have been annotated as 'high' and 'very high' (i.e., agree and agree very much) and below 5 as 'middle.'

Table 47: Maude's educational beliefs, efficacy scores and reflective orientations

Educational beliefs		
	Starting point	**End point**
Cluster membership	*Selective* group (lower ratings)	-
Learning perceptions	Reproducing	Reproducing (performing)
Learning in play perceptions	Performing	(no statements)
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO) (25% meaning – 12% struggling)	Performance (PO) (27% meaning – 9% struggling)
Initial teaching efficacy	Middle (4.8)	-
Efficacy for teaching through play	(none given)	(none given)

Table 48: Anele's educational beliefs, efficacy scores and reflective orientations

Educational beliefs		
	Starting point	**End point**
Cluster membership	*Selective* group (lower ratings)	-
Learning perceptions	Reproducing (empowering)	Reproducing
Learning in play perceptions	Reproducing - performing	(no statements)
Educator role conception	Facilitator (occasionally Font-of-knowledge)	Font-of-knowledge
Learner role conception	Children as immature (occasionally reasoned)	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO) (5% meaning)	Performance (PO) (12% struggling)
Initial teaching efficacy	Middle (4.6)	-
Efficacy for teaching through play	(none given)	High (5)

Table 49: Fikile's educational beliefs, efficacy scores and reflective orientations

Educational beliefs		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Reproducing	Reproducing (performing)
Learning in play perceptions	Performing	Reproducing – performing
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO) (14% struggling)	Performance (PO) (5% struggling)
Initial teaching efficacy	High (5.4)	-
Efficacy for teaching through play	High (5)	High (5)

Table 50: Lihle's educational beliefs, efficacy scores and reflective orientations

Educational beliefs		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Empowering (understanding – performing)	Performing
Learning in play perceptions	Performing (understanding)	Reproducing (understanding)
Educator role conception	Facilitator	Facilitator (occasionally Font-of-knowledge)
Learner role conception	Children as immature (and as reasoned)	Children as reasoned
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Meaning (MO) (40% performance)	Performance (PO) (33% meaning)
Initial teaching efficacy	High (5.4)	-
Efficacy for teaching through play	Very high (6)	High (5)

Table 51: Liyanda's educational beliefs, efficacy scores and reflective orientations

Educational beliefs		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Performing	Performing
Learning in play perceptions	Reproducing (performing)	Performing (reproducing)
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature (occasionally reasoned)	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO) (4% meaning)	Performance (PO) (14% struggling – 10% meaning)
Initial teaching efficacy	High (5.5)	-
Efficacy for teaching through play	High (5)	Middle (4)

Table 52: Thembi's educational beliefs, efficacy scores and reflective orientations

Educational beliefs		
	Starting point	**End point**
Cluster membership	*Selective* group (lower ratings)	-
Learning perceptions	Reproducing	Performing
Learning in play perceptions	Reproducing (performing – understanding)	Reproducing – performing
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO) (17% meaning – 5% struggling)	Performance (PO) (23% meaning – 12% struggling)
Initial teaching efficacy	Middle (4.6)	-
Efficacy for teaching through play	High (5)	Middle (4)

Table 53: Martha's educational beliefs, efficacy scores and reflective orientations

Educational beliefs		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings)	-
Learning perceptions	Reproducing (performing)	Reproducing (performing)
Learning in play perceptions	Reproducing - performing	Reproducing (performing)
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO)	Performance (PO)
Initial teaching efficacy	High (5.4)	-
Efficacy for teaching through play	Very high (6)	High (5)

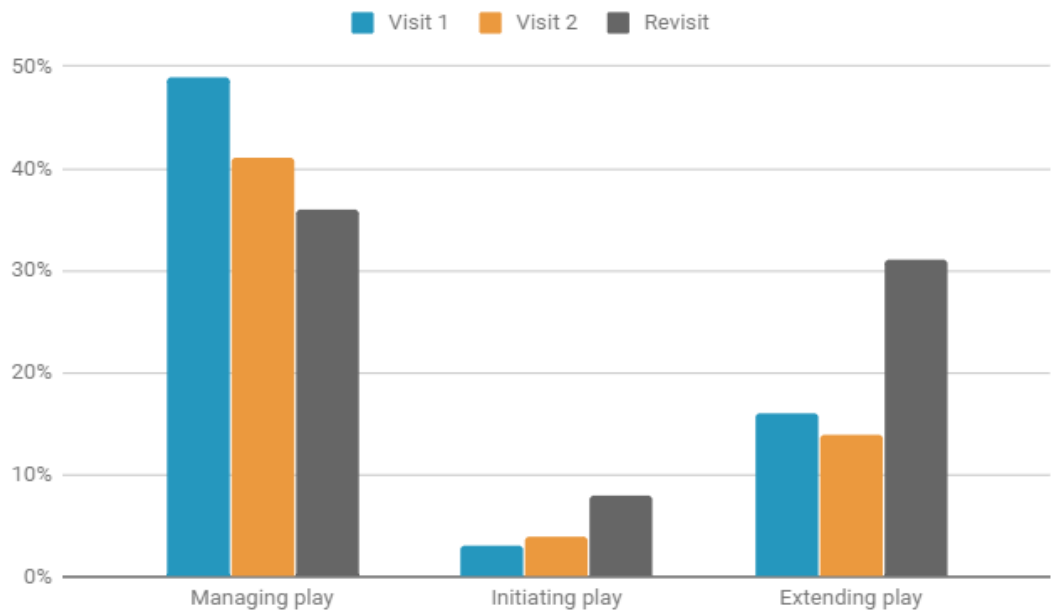
Chapter five | findings on educator roles in play and teaching styles

This chapter covers findings on participants' classroom practices, based on the analysis of 42 videos recorded (16 at visit 1, 16 at visit 2 and 10 at the revisit). Section one concerns the practitioners role with children during play along with learning opportunities, which their presence afforded (RQ 2.1-2). Section two shows their teachings style in play and adult-led activities (RQ 2.3), followed by changes over time. In section three, conclusions are drawn on teaching styles and themes on educator roles in play.

1. Practitioner involvement and roles during play

The thematic analysis of roles practitioners adopted when interacting with children during play resulted in three themes: *managing play*, *initiating play* and *extending play*. Figure 29 shows the duration of each theme in percentages for visits 1, 2 and the revisit.

Figure 29: Duration of educator role in play themes at visits 1, 2 and revisit (N = 42)



Out of the duration of videos recorded at visit 1, the theme *managing play* emerged just under 50% of the time, initiating play occurred 3% and extending play under 20% of the time. For the remainder, practitioners did not facilitate play. Figure 29 further

shows that managing play was the most prominent theme at all visits, followed by extending play. Initiating play happened less often. Interestingly, managing play steadily declined from one visit to the next, while extending play seemed to increase at the last revisit. It is important to note that the revisit took place for five practitioners, not all eight (see chapter three, section 1.5), and hence percentages could represent this group, rather than changes in practice per se.

1.1.1 Introduction to themes on educator roles in play

The thematic analysis of play activity videos showed that practitioners used a variety of facilitation strategies when engaging directly with children during play. When managing play, they helped to sustain children's existing play. Although this role was not a form of guided play according to the criteria derived from the literature (i.e., enriching the play context), it was a common form of facilitation in the video material (see Figure 29). For guided play, two distinct roles emerged: initiating and extending play activities. Below, each theme is described with examples of interchanges between educators and children. For all three roles, observations revealed both productive and less productive examples.

1.1.2 Theme one - managing play

In the South African classrooms, practitioners often managed children's play by circulating between play centres – book corner, fantasy corner, creative and block corners – and asking children about their activities. From the second visit to Thembi's classroom, we find this typical exchange, with the practitioner posing questions to show interest and support children's on-task behaviour:

Practitioner: *What are you doing here?*

Child: *It's a tower.*

Practitioner: *It's a tower? OK, continue building. Let me see your tower. Can I please see your tower?*

When circulating the classroom, practitioners remained close to children and encouraged their continuation of a given play activity. Their questions served to keep the play going, rather than extend or enrich the content of the play.

Practitioners would also validate children's suggestions and experiences through praise and displays of interest. In this next example from Martha's classroom (visit 1), she moved next to a boy building on with wooden blocks:

Practitioner: *What is this?*

Child: *Houses for sleeping.*

Practitioner: *Houses for sleeping? Who is going to sleep there?*

Child: *I don't know.*

Practitioner: *Wow, it's beautiful. So, what is this? What is this?*

Child: (speaks softly).

Practitioner: *Wow, nice.*

Through asking interested questions, Martha was communicating to the boy that his play was valuable. From the classroom videos, managing play seemed most useful for sustaining child engagement in activities and handling minor disruptions in children's play. The final example, featuring Lisa and her teaching assistant at the first classroom visit, illustrates this point on how the role of managing play involved resolving conflicts between children during play, while also ensuring that all children were occupied:

Practitioner: *We don't fight for toys, there are many things that you can play with.*

Assistant: *King, you did take the car first.*

Practitioner: *King, don't fight over things, there are so many things that we can play with. Okay, in everything you are doing, you are going to tell me what it is that you doing.*

Children: (playing in different parts of the classroom)

Practitioner: *Menzi, who took this first? Don't take other kid's things. Boyo took this first, I saw him. Go take something to play with.*

Children: (continue playing)

Practitioner: *King and Linda, we are playing. Why aren't you guys playing? Go play with others.*

This approach to resolving conflicts, where the practitioner intervened and returned a toy, rather than mediating between the children involved, was common in the South African video material. The same went for the practitioners' strategies for keeping children engaged – as seen above, Lisa urges Linda and King to play with peers. In addition to managing at a classroom level, practitioners also found opportunities to engage in guided play by initiating activities, including by inviting children to try different play activities, and starting a new activity all together.

1.1.3 Theme two - initiating play

Initiating play refers to activities that were started by a practitioner, and then actively directed by children, as well as instances where the practitioner introduced a new element to an existing, child-initiated play scenario. At the first classroom visit, Lisa initiated a play activity by distributing sets of six LEGO® Duplo bricks to all children and framing the play by stating: *'Build whatever you want and tell me what it is.'* Although building with the bricks was an adult-initiated activity, the play process itself was in the hands of the children; they were free and encouraged to choose what to build. In another example, Thembi initiated children's play by announcing free choice time. During this period, children could choose among play activities, such as block building, dress-up, quiet reading, toy cars, kitchen sets, and drawing with coloured pens or painting. She then assisted individual children by asking about play preferences and helping them to understand their options:

Practitioner: *You want to read books? Take your chair and move there [points to reading corner in the classroom and turns to another child]. You also want to read? Join them. Those who like to read can go read (…)*

Practitioner: *Where do you want to go, my friend, where would you like to work? No, don't fight over toys. Do you want to read or play with puzzles here? (…)*

Child: *[speaks softly]*

Practitioner: *You want to be there? Okay, move to that side so we can have space (…)*

In her brief exchanges with children, Thembi was warm in her manner, nodding and smiling as she leaned in to listen carefully to children's responses: If children seemed unsure in Thembi's class, she made suggestions and pointed to different areas as options, rather than dictating where children should go or what they should play.

These findings corresponded with Thembi's teaching style, which had high scores on facilitating, over directing and withdrawing, when compared with her peers (see section 2.1.3 in this chapter). As illustrated in these examples of initiating play, the locus of control for the play remained in the hands of the children, while Lisa and Thembi actively initiated new learning possibilities within the play context.

Although practitioners enriched children's play by initiating activities, offering new learning goals, or co-playing, it was sometimes challenging to find the balance between being a co-player and 'hijacking' children's voluntary engagement in play. For instance, Martha also initiated play by asking each child in turn which activity they would like to engage in during the free choice period. When one child moved to an area of the classroom with cleaning equipment, she first asked the child an open-ended question, *'What do you want to do there?'*, but then pointed to the block centre and said, *'I'd rather you go there and build like a man.'* Here, the child lost his agency in the play, as decisions were made on his behalf, instead of being supported in his choice. Further, the final comment enforced stereotypical gender roles, discouraging this boy from cleaning and encouraging him to build instead. This balance of supporting and undermining children's efforts was likewise captured by the ECCOM social climate scale through practitioners' profiles of directive, facilitative and withdrawn styles for each activity type (see section 2.2 in this chapter). In Martha's case, for instance, her scores on facilitating and directing children were similar at the first visit (2.8 out of 5 and 2.75 out of 5, respectively).

Concluding on the initiating theme, practitioners typically introduced new play activities to the children, and occasionally added new elements to existing play scenarios. In less productive instances of initiating play, they struggled with remaining a co-player, often taking over the play by being directive. This is a key challenge, since the adult role in guided play is to scaffold children's learning while ensuring they retain a sense of agency.

1.1.4 Theme three - extending play

Extending play refers to situations where children engaged in some form of play and practitioners enriched their experiences, supporting children's efforts to reach their goals. In many of the classrooms, practitioners extended children's play by asking more open-ended questions and helping them to explore and make use of materials.

At the second visit, children in Liyanda's class were playing various outdoor activities, such as digging with shovels, playing tennis, and riding scooters. During this time, she joined a game of tennis with four children; first, the children kept passing the ball to her, rather than to one another. Through a combination of prompts, gestures, and modelling, Liyanda guided the children to keep the ball going between all members of the group; this way, she demonstrated how a practitioner might follow children's lead in play while also challenging them to progress – in this case, towards mastering collaborative forms of peer play. In another example from Maude's class, children sat on the floor in pairs and groups putting together puzzles, and taking turns placing puzzle pieces. Maude was also participating in the activity. She sat close together with children, playing with them as a peer, and occasionally challenging their play:

Practitioner: *Help each other, do not take puzzle pieces away from each other.*

Child: *Ms., look at this head. Where is the head, Ms.?*

Practitioner: *The head? The head must be black because our hair is black, isn't it so?*

Child: *I am done.*

Practitioner: *You are done? How can you finish when you still hold a piece in your hands? You see, with puzzles, if you still have pieces, you are not done.*

Read out of context, the exchange above could seem directive. But looking across the South African video data, Maude offered an example of extending in an inquisitive and calm manner, which stood in contrast to instances of openly disregarding children's thoughts. In the interchange above, she modelled reasoning about how to fit puzzle pieces together and encouraged children's use of knowledge gained from real-life experiences (i.e., a piece showing a head must be black because our hair is black) to attach puzzle pieces that were similar in colour. The child could then apply the same strategy to the rest of the task. In addition, Maude modelled on-task behaviour by remaining engaged with the puzzle throughout their play and communicating the rules of the activity. Finally, she did not dictate the child's activities—while she shared her knowledge on how puzzles work, the child could decide whether she wished to continue with the task. Greater playfulness on the part of Maude, along with asking more open-ended questions, would certainly resonate more with examples of guided play from other cultural contexts (e.g., McInnes et al., 2013). Maude exemplified how South African practitioners might

engage children in strategies for applying their real-life knowledge. By contrast, some of her peers were observed making attempts to extend children's play, but with strategies that fell short of enriching the play context. In one example, Fikile joined a group of children playing with a kitchen set and directed the play by assigning roles and tasks: *'Please make me tea mothers,'* and *'Go buy bread if you don't have bread.'* In doing so, she began controlling the direction of the play instead of co-playing with the children. To extend the play using a guided play approach, she could have listened to what the children were engaged in before entering their play. By tuning in to children's interests and states of mind, practitioners are in a better position to spot moments in the play where their presence can enrich without disrupting. As an illustration, Thembi entered some of her learners' play by knocking on a 'door' near the kitchen area and asking what they were cooking. Following their response ('tea'), she expressed an enthusiastic wish for tea, acting as a co-player.

Concluding on this theme, the South African practitioners extended children's play in various ways, including asking open-ended questions and supporting children's exploration of materials and play contexts. In less productive instances of extending play, they struggled to ask questions that enriched children's learning and instead became directive in the play. The next section two turns towards findings from video coding of practitioners' teaching styles.

2. Practitioners' teaching styles

The ECCOM social climate scale (Stipek & Byler, 2004) was used to capture the extent to which each practitioner adopted a facilitative, directive and withdrawn style in class. When facilitating, practitioners were observed to have a warm approach with children, relating activities to their experiences, and encouraging children to elaborate on their thoughts. High levels of this style meant practitioners adapted tasks to meet children's needs and ensured that all had opportunities to engage. As such, this style represented a balance of adult and child involvement. In the directive style, the adult was more involved: all conversations tended to be adult-controlled, tasks were seated, more passive and inflexible, just as children's engagement was insisted upon, rather than encouraged. In the final style, the adult took a withdrawn role: Efforts to guide children through activities or engage them were more sporadic and laissez-faire, with some children wandering around the class or disregarding the practitioners' guidance.

High levels of this withdrawn style meant that children were more free to do as they pleased, but they also showed signs of disengagement; occasionally, conflicts were overlooked. The next sections present descriptive statistics for each style, followed by findings for each practitioner.

2.1.1 Descriptive statistics for the teaching style subscales

Table 54 shows items in the final subscales, Facilitative (A), Directive (T) and Withdrawn (C). Along with mean scores for each item (South African scores are indicated in **bold**), this table presents benchmark ECCOM mean scores from classes in Finland, Estonia and the United states; these scores are drawn from Lerkkanen and colleagues' validation study (2012). In this study, researchers coded each style in Finnish and Estonian early childhood classrooms (children aged 6 in Finland, and between 4 and 7 years in Estonia) and compared with those of the original study (United States, Stipek & Byler, 2004). Lerkkanen and colleagues (2012) did not include items 1A and 2A in their coding, and in Stipek and Byler's original study (2004), scores on the withdrawn style were not reported. Consequently, these scores are blank in Table 54.

Comparing item scores across the four countries, a notable difference is in the South African scores for items on the withdrawn style: these are all above 2, compared to no Finnish scores above 2 and two Estonian item means above 2. Another item, which stands out, is 5A (which was later excluded, see chapter three, section 5.2.3). This item refers to promoting social interaction and communication among children, a practice that was found to be rare for the South African practitioners (mean of 1.7 out of 5), just as little variation was observed across the group. Item 6C was also excluded based on the reliability analysis (see section 5.2 in chapter three). In Table 54, this item likewise stands out (2.43, compared to 1.41 for Finland and 1.92 for Estonia). Item 6C represents practices where child participation is 'high but not necessarily productive' (ECCOM Coding Manual, Stipek & Byler, 2005). Even with translated video transcripts, it was difficult for coders to judge and agree on 'productive' versus 'unproductive' forms of child participation. Practice indicators were more specific and easier to code for both items 6A and 6T.

Table 54: Means and *SDs* for items on ECCOM subscales in South African (SA, N = 42), Finland (FI), Estonian (ES) and US early childhood classrooms

Items	Facilitative (A)				Directive (T)				Withdrawn (C)		
1	3.81 (1.23)				*NA*				*NA*		
2	2.76 (1.03)				*NA*				*NA*		
	SA	**FI**	**ES**	**US**	**SA**	**FI**	**ES**	**US**	**SA**	**FI**	**ES**
3	**2.24** ***1.06***	3.06 *1.02*	3.31 *1.05*	2.80 *1.52*	**2.69** ***1.41***	2.08 *1.08*	2.27 *.99*	2.58 *1.54*	**2.52** ***1.35***	1.85 *.80*	2.35 *1.03*
4	**2.33** ***1.07***	2.74 *1.09*	3.15 *1.22*	2.37 *1.41*	**2.55** ***1.33***	2.38 *1.16*	2.56 *1.12*	3.01 *1.57*	**2.12** ***1.29***	1.54 *.63*	1.74 *.68*
5	**1.71** ***.92***	2.58 *1.04*	3.39 *1.02*	2.53 *1.52*	**2.88** ***1.35***	2.38 *1.17*	1.65 *.72*	2.90 *1.67*	**2.14** ***1.37***	1.83 *.65*	2.71 *1.06*
6	**2.64** ***1.32***	3.23 *1.03*	3.77 *.91*	3.02 *1.48*	**2.14** ***1.30***	2.08 *.98*	1.68 *.85*	2.47 *1.58*	**2.43** ***1.27***	1.41 *.61*	1.92 *.98*

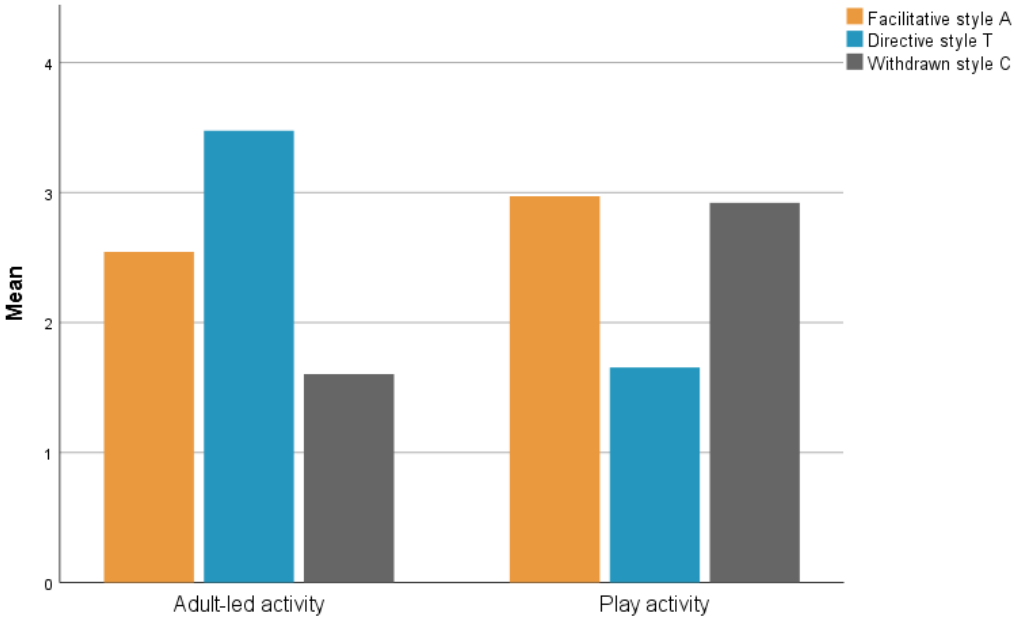
For instance, coders could look for practitioner attempts to engage children who did not volunteer and children remaining with an activity for 10 minutes or more (6A), versus children not participating and the practitioner conducting them through rote memorisation (6T). Both items, which were included in the final scale, are indicated in orange in Table 54.

2.1.2 Results on the South African classroom data

In the South African version of the ECCOM social climate scale, the facilitating style reflected a balance of child and adult involvement characterised by warmth and responsiveness; activities related to children's own experiences; the practitioner encouraged children to contribute during discussions and elaborate on their thoughts, respecting individual skill levels, praising children for their efforts, and making attempts to engage all. Items in the directive style denoted a highly involved adult role imposing control, posing direct questions and favouring correct answers; children were not encouraged to talk together, but tended to do the same task, and occasionally, some children were exposed or scolded in front of peers. Finally, the three items in the withdrawn style combined to describe an under-involved practitioner, who allowed children to interact more or less freely, articulated few expectations and gave little guidance (but intervened if conflicts escalated); this practitioner would tend not to notice individual children's effort or needs, nor engage them in more than brief interchanges, just as only some children were given a chance

to speak in front of peers. Figure 30 shows mean scores for these three teaching styles based on all videos coded. The teaching styles are indicated in **orange** (facilitative style), **blue** (directive style) and **dark grey** (withdrawn style).

Figure 30: Overall teaching style mean scores by activity setting (N = 42)

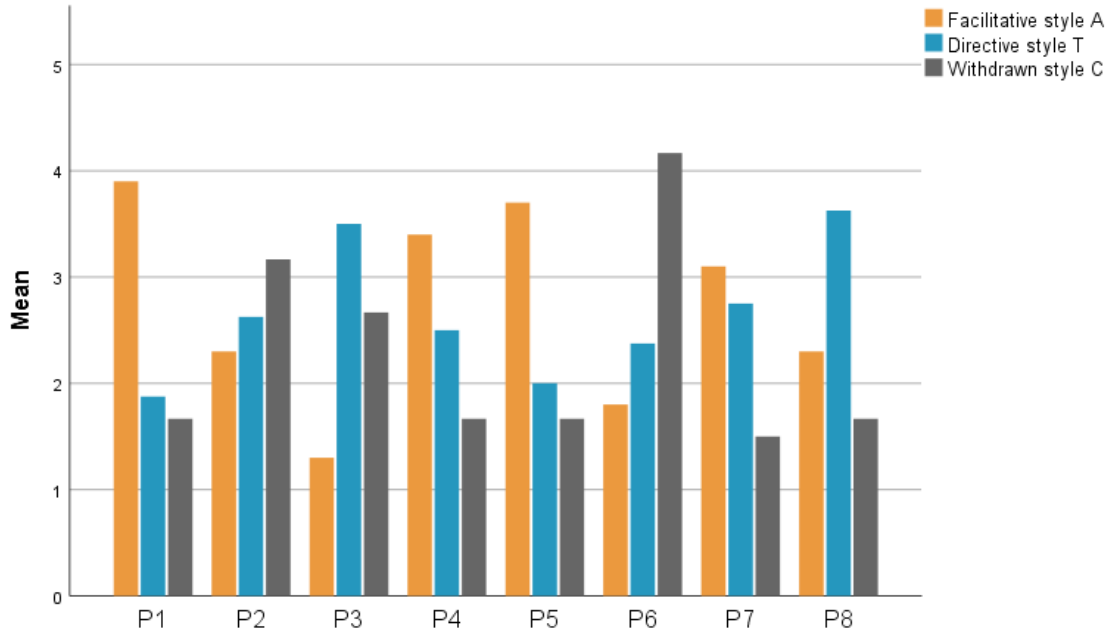


As might be expected, Figure 30 shows that practitioners tended towards a more directive style during adult-led activities overall; vice versa, both the facilitating and withdrawn styles featured more prominently for play activities. These findings suggest that the adapted version of the ECCOM social climate scale was able to distinguish practice styles across activity settings in the South African context.

2.1.3 Starting point for the practitioners' teaching styles

In Figure 31, practitioners' teaching styles at visit 1 are shown separately. For the *facilitative style* (A), one practitioner stood out with a mean of nearly 4 (Maude, P1), while three formed runners-up with means above 3 (Lisa, P4; Lihle, P5, and Thembi, P7). The lowest mean for this teaching style was close to 1 (Fikile, P3). For the *directive style*, two practitioners had means above 3 (Fikile, P3, and Martha, P8), two were at or just under 2 (Maude, P1 and Lihle, P5), while most means fell between 2 and 3 (Anele, P2; Lisa, P4; Liyanda, P6, Thembi, P7). For the final style, *withdrawn* (C), one practitioner had a notably higher mean above 4 (Liyanda, P6), one mean was just above 3 (Anele, P2), one just under 3 (Fikile, P3), and the rest had means below 2 (Maude, P1; Lisa, P4; Lihle, P5; Thembi, P7, and Martha, P8).

Figure 31: Practitioner teaching styles at visit 1 (N = 16)

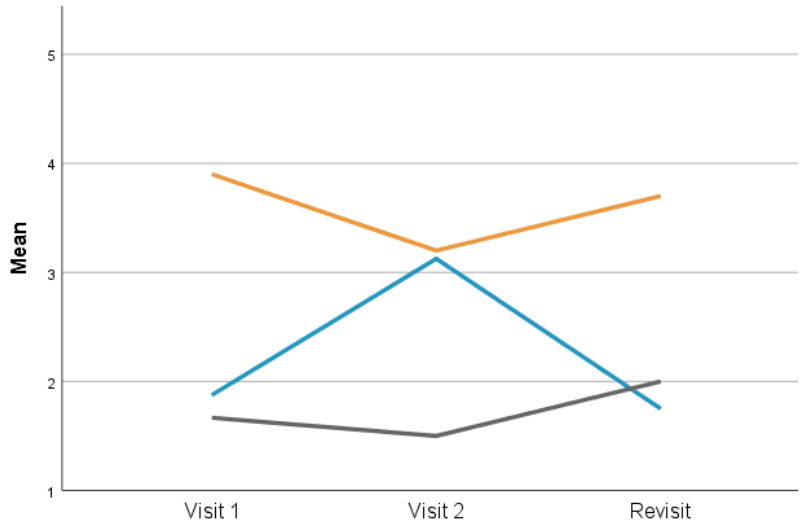


When considering the three teaching styles together for each practitioner, Maude (P1) and Lihle (P5) started out with a more facilitative style overall, and only some instances of directing and withdrawing. By contrast, Fikile (P3) and Martha (P8) had more directive styles. For Liyanda (P6), and to some extent Anele (P2), their styles were characterised by a withdrawn role along with elements of directing children. Lisa (P4) and Thembi (P7) had similar mixed styles with moderate facilitation styles (just over 3), followed by some directing and less withdrawing.

2.1.4 Changes in teaching styles over time

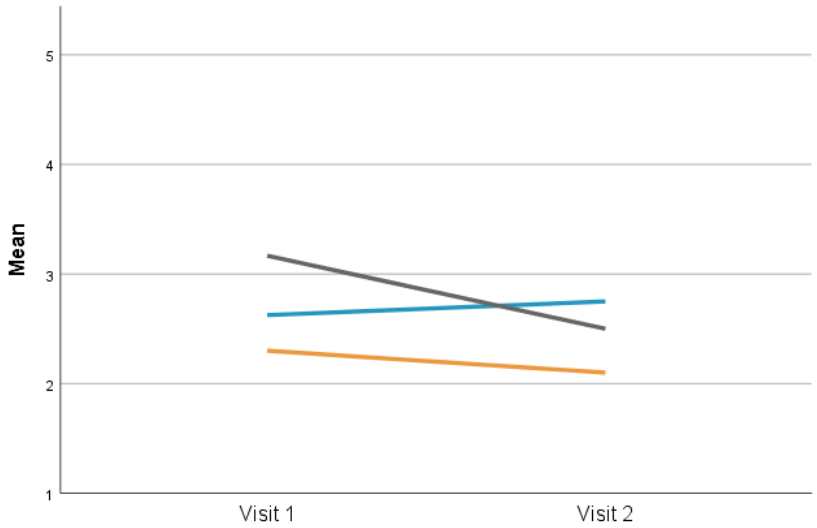
The overviews below show changes in teaching styles for each practitioner in turn. Two time points are indicated for Anele (P2), Thembi (P7) and Martha (P8); for these three practitioners, interviews were conducted during the two planned visits, 1 and 2. For the remaining five practitioners – Maude (P1), Fikile (P3), Lisa (P4), Lihle (P5), and Liyanda P6 – three time points are indicated: visits 1, 2 and a revisit. As noted in the previous chapter, the final interviews for this group took place at the revisit (see Methodology, section 2.2). In all overviews, the three teaching styles are indicated by the following colours: **orange** (A: *Facilitative style*), **blue** (T: *Directive style*) and **dark grey** (C: *Withdrawn style*).

Figure 32: Maude's teaching style over time



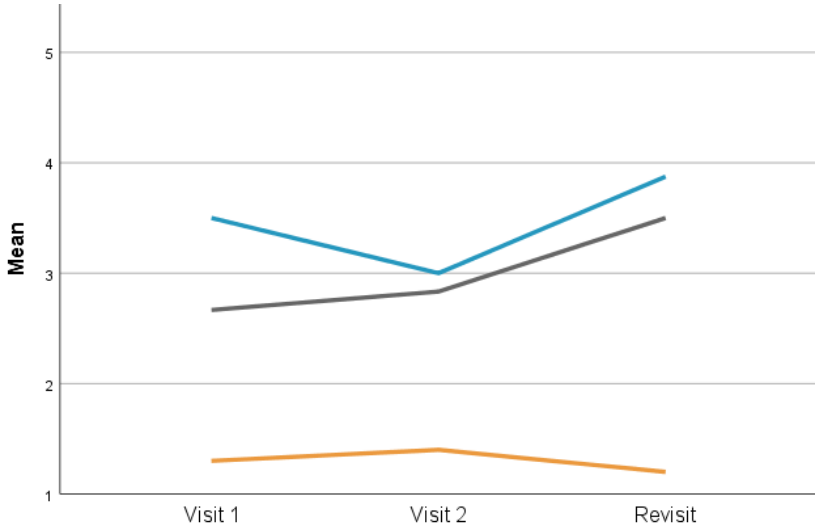
Maude's practice starting point (see Figure 32) was a mostly facilitative teaching style (just under 4) with directive and withdrawn elements at similar levels (just under 2). Over time, her practice fluctuated: facilitation went down nearly one point, before returning to the start level of just under 4; her directiveness increased more than one point but returned to under 2 at the final visit; Maude's withdrawn role stayed low for all three visits (under 2), with a slight increase towards the end. Hence, her combined teaching style did not seem to change, as her practice returned close to start levels.

Figure 33: Anele's teaching style over time



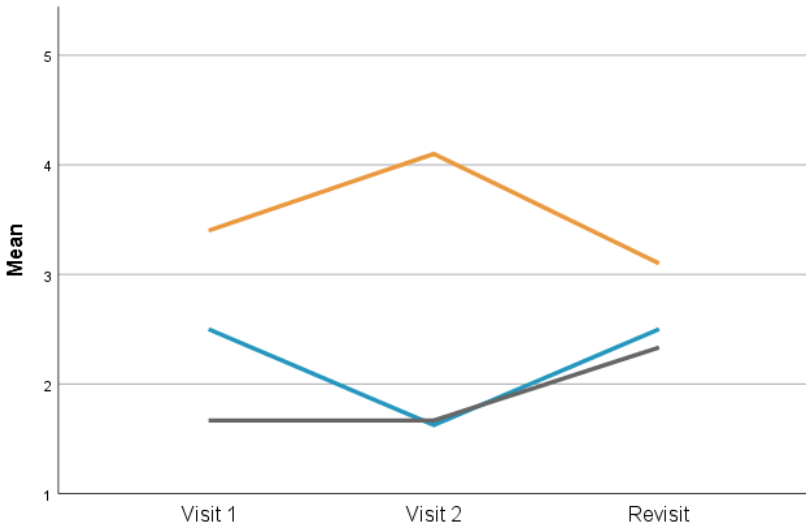
Anele first had a more withdrawn role (over 3), with some directiveness and fewer instances of facilitating (both under 3). Over time, her withdrawn style decreased (under 3), just as her facilitation went slightly lower (close to 2). The only increase was a minor shift in directiveness, although this style stayed under 3 throughout.

Figure 34: Fikile's teaching style over time



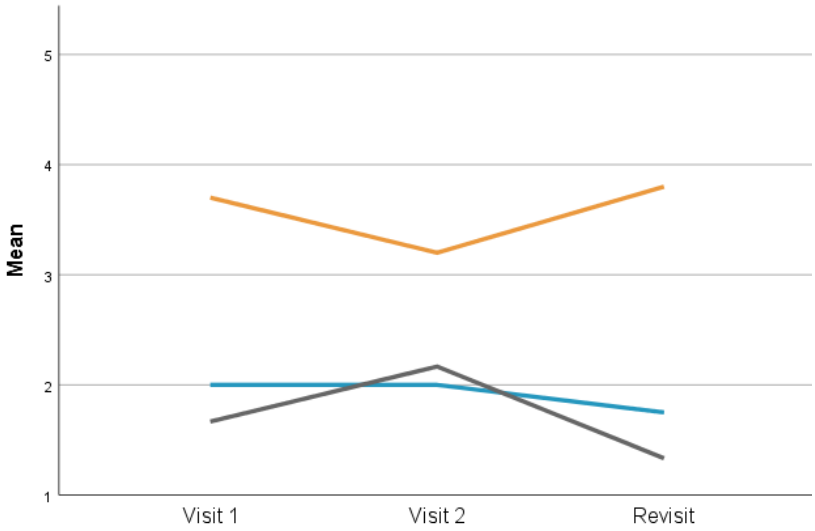
For Fikile, her practice starting point was a mainly directive style (over 3), mixed with a more withdrawn role (just under 3). Her level of facilitating was low (close to 1) from start to end of study. Over time, both Fikile's directiveness and withdrawing increased. So, her practice did change, but on these two styles, and not facilitating.

Figure 35: Lisa's teaching style over time



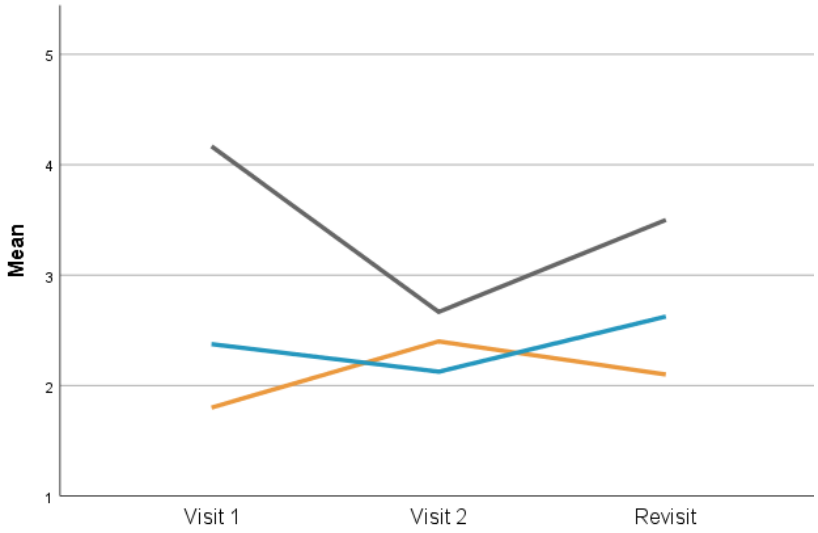
Lisa's initial practice was characterised by a somewhat facilitating role (over 3), with occasional directiveness and rarely withdrawing. Like in Maude's case, Lisa's practice fluctuated with an opposite pattern: her facilitating style increased to just over 4 and dropped at the revisit; she was less directive at visit 2 (under 2) but this returned to her start level (over 2); finally, her level of withdrawing increased slightly to over 2 at the revisit. Overall, her practice returned to start levels.

Figure 36: Lihle's teaching style over time



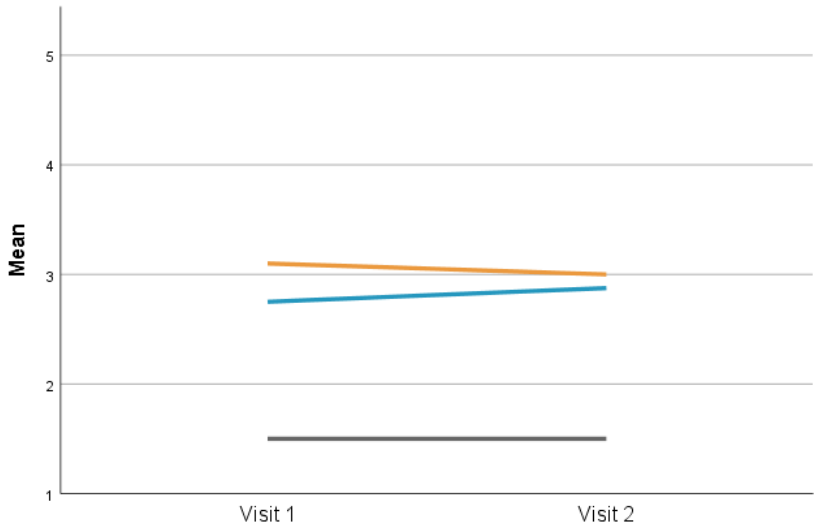
Lihle's practice starting point saw higher levels of facilitating (over 3, closer to 4), just as she rarely adopted either a directive (2) or withdrawn role with children (under 2). Over time, this style combination fluctuated slightly, with facilitation decreasing close to 3, before returning to start levels close to 4; instances of withdrawing were even fewer (close to 1). Over all, little practice change took place over time.

Figure 37: Liyanda's teaching style over time



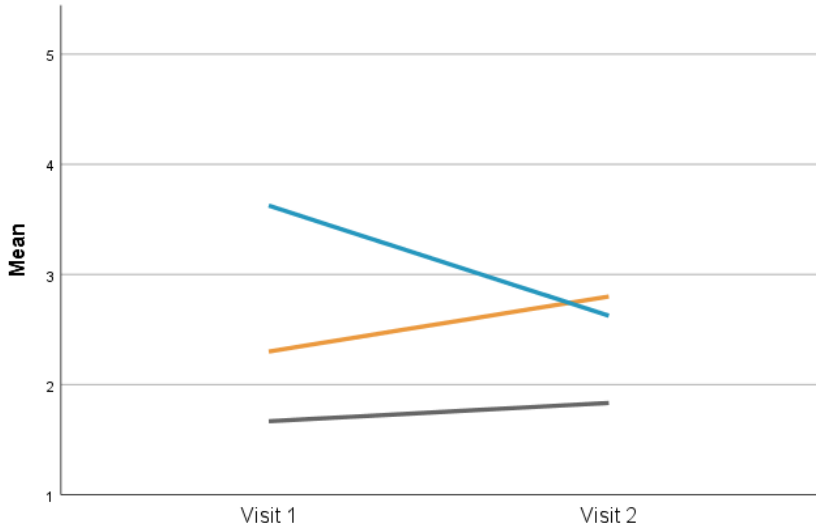
Liyanda started out with a very withdrawn teaching role (over 4), occasional directiveness (over 2) and low facilitation (under 2). Over time, she became more engaged with children, both in terms of directing and facilitating, though changes were minor. Her withdrawn role decreased sharply (under 3) at the second visit but increased again at the revisit (above 3). These shifts presented a mixed picture in terms of changes in teaching style: withdrawing decreased but remain the dominant practice, followed by an occasionally directive role and rare instances of facilitating.

Figure 38: Thembi's teaching style over time



The three lines in Figure 38 show that Thembi's teaching style as very stable over time; her practice was mostly characterised by facilitating and directing (close to 3), though neither style was pronounced. Thembi rarely adopted a withdrawn role with. Over time, this practice pattern remained unchanged.

Figure 39: Martha's teaching style over time



In Martha's case, her practice was first dominated by a directive role (over 3), and occasional instances of facilitating (over 2) and few of withdrawing (under 2). Later, her practice shifted to slightly more facilitative (close to 3) and notably less directive (under 3). She rarely withdrew while teaching at both visits. These shifts pointed to minor changes overall, with facilitation increasing and directiveness decreasing.

2.2 Comparing individual teaching practices over time

This next section presents the combined practice indicators for Maude, Anele, Fikile, Lihle, Liyanda, Thembi and Martha. Lisa was omitted at this point due to missing data. The tables summarise findings on educator roles in play (i.e., percentage of time spent managing and guiding children's play, see Appendix thirteen) together with scores for all three teaching styles during play and adult-led activities. The start and end points of both indicators are included. In cases where a practitioner received a revisit, three time points are shown. At each time point, dominant styles are highlighted in colour and bold text.

2.2.1 Practitioner one: Maude

Reviewing Maude's practice, her high levels of facilitating children's learning and play were notable, especially compared to the group overall: 57-58% guiding play and scores of 3.6-3.8 on facilitating play activities. A score of three in the ECCOM social climate scale indicated that practices associated with a style where sometimes seen; scoring four meant a given style was prominent (but not dominant or constantly observed). Hence, Maude's facilitating style was evident, if not constantly observed. Guided play practices indicated an educator role of being present and interacting with children during play, supporting, modelling and even some instances of enriching the play but without taking over children's play activities.

Table 55: Summary of Maude's teaching practice

Teaching practice – Maude			
	Starting point		**End point**
Educator role in play (% of time)	Guiding play (57%) Managing play (0%)	Guiding play (0%) Managing play (0%)	Guiding play (58%) Managing play (35%)
Teaching style overall	Facilitative style	Mixed style (facilitative / directive)	Facilitative style
Teaching style in play activities	**Facilitative: 3.6** Directive: 1.25 Withdrawn: 2.33	Facilitative: 2.8 **Directive: 3.25** Withdrawn: 2.00	**Facilitative: 3.8** Directive: 1 Withdrawn: 2.67
Teaching style in adult-led activities	**Facilitative: 4.2** Directive: 2.5 Withdrawn: 1	**Facilitative: 3.6** Directive: 3 Withdrawn: 1	**Facilitative: 3.6** Directive: 2.5 Withdrawn: 1.33

Anecdotally, Maude's classroom approach was characterised by calm, kindness, and some firmness. She would model play activities: pretending to cook or reading in the book corner. In discussion activities, Maude would face the children, leaning in to hear their responses with an air of encouragement, as well as one of authority. The combination of facilitating and directing roles seen in the table highlighted Maude as an involved practitioner who engaged with children, occasionally taking over or steering activities, including in play. Finally, there were some signs that her practice fluctuated: towards end of term, (time point 2), she became more directive, but her practice shifted back towards its original levels in the new term (time point three).

2.2.2 Practitioner two: Anele

In terms of involvement, Anele stood in contrast to Maude: she mostly adopted a withdrawn role with children whether in play or adult-led activities. Yet like Maude, Anele's manner was calm and patient. In play, she stood back and observed children with interest. Her withdrawn role in adult-led activities came out as not ensuring that all children were engaged or given a chance to speak, children having great discretion in how to participate, with some wandering around or disengaging from class discussions (lying on the floor, teasing, playing with their shoes).

Table 56: Summary of Anele's teaching practice

Teaching practice – Anele		
	Starting point	**End point**
Educator role in play (% of time)	Guiding play (0%) Managing play (0%)	Guiding play (3%) Managing play (52%)
Teaching style overall	Withdrawn style	Mixed style (directive / withdrawn)
Teaching style in play activities	Facilitative: 2.2 Directive: 2.5 **Withdrawn: 3**	Facilitative: 2.6 Directive: 1 **Withdrawn: 4**
Teaching style in adult-led activities	Facilitative: 2.4 Directive: 2.75 **Withdrawn: 3.33**	Facilitative: 1.6 **Directive: 4** Withdrawn: 1

Over time, Anele's practice appeared to shift but towards directing more during adult-led activities; in play, she took on a role of play manager, providing materials and keeping the play going, as well as being withdrawn.

2.2.3 Practitioner three: Fikile

Fikile was a clear example of a practitioner who shifted between being highly involved and directive in adult-led activities and stepping in the background during children's play. Hers was the highest score overall on both. A score of five on the ECCOM social climate scale for the directive style indicated a practitioner who controlled all conversations by posing direct questions and asking children to recite content; tasks were inflexible, and seated activities with few opportunities for peer interactions, and some children struggling to participate. Fikile's scores on the facilitating style were among the lowest – this was due to her lack of warmth, as captured by the instrument.

Table 57: Summary of Fikile's teaching practice

Teaching practice – Fikile			
	Starting point		**End point**
Educator role in play (% of time)	Guiding play (12%) Managing play (28%)	Guiding play (0%) Managing play (0%)	Guiding play (0%) Managing play (0%)
Teaching style overall	Mixed style (directive / withdrawn)	Mixed style (directive / withdrawn)	Mixed style (directive / withdrawn)
Teaching style in play activities	Facilitative: 1.6 Directive: 2 **Withdrawn: 4**	Facilitative: 1.6 Directive: 1.25 **Withdrawn: 4.67**	Facilitative: 1.4 Directive: 2.75 **Withdrawn: 5**
Teaching style in adult-led activities	Facilitative: 1 **Directive: 5** Withdrawn: 1.33	Facilitative: 1.2 **Directive: 4.75** Withdrawn: 1	Facilitative: 1 **Directive: 5** Withdrawn: 2

Unlike her peers, Fikile had moments of being stern and occasionally exposing individual children. Over time, her approach in practice was stable. At the third time point, she retained high scores on both the withdrawn and directive styles for play and adult-led activities.

2.2.4 Practitioner five: Lihle

Lihle had steady levels of facilitating children's engaged learning, including in play. Her scores of 3-4 on the facilitative style suggested an actively involved and responsive role at similar levels to Maude, though from watching their videos, these practitioners differed on seeming enjoyment and playfulness overall. Where Lihle would be spontaneous and join children in their play, laughing with them, holding a baby and adopting a 'what's-up' attitude in tune with a girl who approached, Maude was more aloof.

Table 58: Summary of Lihle's teaching practice

Teaching practice – Lihle*			
	Starting point		**End point**
Educator role in play (% of time)	Guiding play (0%) Managing play (0%)	Guiding play (20%) Managing play (8%)	Guiding play (4%) Managing play (40%)
Teaching style overall	Facilitative style	Facilitative style	Facilitative style
Teaching style in play activities	**Facilitative: 3.6** Directive: 1 Withdrawn: 2.33	**Facilitative: 3.2** Directive: 1.25 Withdrawn: 3.33	**Facilitative: 4.2** Directive: 1 Withdrawn: 1.67
Teaching style in adult-led activities	**Facilitative: 3.8** Directive: 3 Withdrawn: 1	**Facilitative: 3.2** Directive: 2.75 Withdrawn: 1	**Facilitative: 3.4** Directive: 1.25 Withdrawn: 1

The ECCOM social climate scale did capture adult warmth (see Appendix eleven) but not playful spontaneity. As such, from study start to end, Lihle's practice saw little change: she was slightly more involved in play (score of 4.2, managing role 40% of the time) without necessarily enriching or extending children's play in line with guided play practices. Interestingly, her directive score for adult-led activities shifted down over time (3 to 1.25).

2.2.5 Practitioner six: Liyanda

Liyanda's style in play activities was predominantly withdrawn, while in adult-led activities, she demonstrated a moderate mix of styles: starting with a mainly withdrawn style, she shifted towards directing more, though this style was not pronounced.

Table 59: Summary of Liyanda's teaching practice

Teaching practice – Liyanda*			
	Starting point		**End point**
Educator role in play (% of time)	Guiding play (0%) Managing play (0%)	Guiding play (36%) Managing play (23%)	Guiding play (0%) Managing play (0%)
Teaching style overall	Withdrawn style	Mixed style (withdrawn / directive)	Mixed style (withdrawn / directive)
Teaching style in play activities	Facilitative: 1.6 Directive: 2 **Withdrawn: 5**	Facilitative: 2.8 Directive: 1 **Withdrawn: 4**	Facilitative: 2.4 Directive: 1.75 **Withdrawn: 4**
Teaching style in adult-led activities	Facilitative: 2 Directive: 2.75 **Withdrawn: 3.33**	Facilitative: 2 **Directive: 3.25** Withdrawn: 1.33	Facilitative: 1.8 **Directive: 3.5** Withdrawn: 3

When noticing Liyanda's degree of facilitating during play activities, scores over time show a slight increase, even if instances are occasional. Comparing with her slight increase on directing during adult-led activities, Liyanda was a milder case of switching between more and less involved roles with children.

2.2.6 Practitioner seven: Thembi

Thembi represented a different switch of roles, and this tendency was pronounced: in play activities, she was highly facilitative (scores of 4-4.6), but equally, she had a strong directive style during adult-led activities.

Table 60: Summary of Thembi's teaching practice

Teaching practice – Thembi		
	Starting point	**End point**
Educator role in play (% of time)	Guiding play (22%) Managing play (77%)	Guiding play (8%) Managing play (88%)
Teaching style overall	Mixed style (directing / facilitating)	Mixed style (directing / facilitating)
Teaching style in play activities	**Facilitative: 4** Directive: 1.25 Withdrawn: 3	**Facilitative: 4.6** Directive: 1 Withdrawn: 1.67
Teaching style in adult-led activities	Facilitative: 2.2 **Directive: 4.25** Withdrawn: 1.67	Facilitative: 1.4 **Directive: 4.75** Withdrawn: 1.33

Over time, Thembi continued to demonstrate a split role, when comparing activity types, and this split became even clearer with increasing scores. When directing children, her demeanour was firm but she did not appear harsh.

2.2.7 Practitioner eight: Martha

Martha's main style in adult-led activities was directive; this was pronounced at study start with a high score of 4.5 (out of 5). Towards study end, however, Martha had shifted to steering children less and facilitating more.

Table 61: Summary of Martha's teaching practice

Teaching practice – Martha		
	Starting point	**End point**
Educator role in play (% of time)	Guiding play (0%) Managing play (54%)	Guiding play (24%) Managing play (39%)
Teaching style overall	Directive style (some facilitating)	Mixed style (directive / withdrawn)
Teaching style in play activities	**Facilitative: 2.8** Directive: 2.75 Withdrawn: 1	Facilitative: 2.6 Directive: 2 **Withdrawn: 2.67**
Teaching style in adult-led activities	Facilitative: 1.8 **Directive: 4.5** Withdrawn: 2.33	Facilitative: 3 **Directive: 3.25** Withdrawn: 1

Her style and role in play activities presented a different picture. Martha began with an involved style, combing instances of facilitating and directing. Later, she became slightly less involved, though her role in play also seemed to change from mainly managing children's play to some moments of guiding as well.

3. Chapter conclusions

This chapter has presented findings on research question two, which asked about practitioners' style of interacting with children, their role in play, and how both aspects of practice shifted over time (RQ 2.1-3). Findings across the thematic analysis of educator roles in play and scores on teaching styles showed fluctuating practices over time, rather than patterns of steady change. As regards revisit findings, it is worth recalling that practitioners were working with a new group of learners at this point. Since these children were younger and less familiar with school, they would more closely resemble learners taught at visit 1 (see section 1.5 in the methodology chapter). Such circumstances could partly explain the practice fluctuations observed.

3.1 Conclusions on educator roles in play

The thematic analysis of play activity videos showed that practitioners in the study used three primary roles when engaging directly with children during play. The most common educator role was managing play, where practitioners circulated between play centres and asked children about their activities to keep the play going. Though observed more frequently, managing play was not a form of guided play according to the defining criteria (i.e., enriching the play context). In terms of guided forms of engaging with children during play, two distinct educator roles emerged: initiating and extending play activities. Initiating play meant a practitioner introduced a new play activity or a new element to children's existing play scenario and then let them take over. When extending play, practitioners joined children playing, supported their efforts to reach goals and enriched the play experience by asking more open-ended questions, modelling and helping them to explore and make use of materials. From study start to end, three practitioners changed their educator role from not being involved and to taking an active role in children's play (including managing play): Anele, Lihle and Martha. Maude also became more involved but by adding elements of managing children's play to an already responsive role of guiding their efforts, while Thembi shifted from some instances of guiding, and many instances of managing children's play, to adopting a more managing role. Finally, Liyanda and Fikile both had no discernible instances of either educator role in play at study end (see Appendix thirteen).

3.2 Concluding on practitioner teaching styles

In addition to mapping patterns in the South African practitioners' roles in play, their teaching styles across adult-led and play activities were captured using the ECCOM social climate scale. In the South African version of this scale, a facilitating style reflected a balance between child and adult involvement, where practitioners adopted a responsive and warm approach and children had opportunities to contribute and expand their understanding through engaging activities. A directive style meant the adult dominated through controlling discussions and favouring correct answers, while children were more passive and tasks less flexible. The final withdrawn style denoted an under-involved practitioner, who gave little guidance, let children participate or wander as they liked and tended not to notice their efforts or needs.

Focusing on changes in dominant teaching styles over time, two practitioners in the group evidenced little change: Maude's practice remained at moderate levels of facilitation for both activity types (3.8 for play, 3.6 for adult-led); Fikile's practices also changed little – she remained very withdrawn in play (4 to 5) and directive in adult-led activities (5 to 5). Three practitioners had more marked changes over time: Thembi became more facilitative in play (4 to 4.6) and slightly more directive in adult-led (4.25 to 4.75); Lihle became slightly more facilitative in play activities (3.6 to 4.2), and slightly less so in adult-led activities (3.8 to 3.4), while Liyanda changed to a less withdrawn role in play (5 to 4), which was countered by a more directive style in adult-led activities (2.75-3.5). The last two practitioners saw more drastic shifts in their practice: Martha seemed to be less involved overall – she became more withdrawn in play (1 to 2.67), and less directive in adult-led activities (4.5 to 3.25). Anele's withdrawn style in play was even more pronounced at study end (3 to 4), and she adopted a more directive style with children in adult-led activities (2.75 to 4).

3.3 Conclusions on the facilitative style and guided play

Given its resemblance to the guided play approach, the facilitative style was of special interest in this study (see chapter two, section 1.3). As noted, higher scores on this style indicated a warm and responsive practitioner, who related activities to children's experiences, ensured that most had opportunities to speak, supported children to elaborate on their thoughts, adapted activities and attempted to engage all children. Across the seven practitioners, scores on this style tended to be around 3 rather than higher (scores of 4 to 5). Lihle and Maude were the only ones with scores

above 3 for the facilitating style in both play and adult-led activities. Maude's teaching style corresponded to some instances of guiding children's efforts in play and most of managing play, and while Thembi and Lihle were top scorers for this style in play. These findings showed that the South African practitioners tended to manage children's play by circulating and showing interest, over adopting a guiding role. In the next chapter, findings for the whole change model are combined in order to answer research questions three and four on mapping practitioner change journeys and explore to what extent the CAMCC was able to explain shifts over time.

Chapter six | findings on change journeys

In the two previous chapters, separate pieces of the CAMCC were addressed, including practitioners' educational beliefs and change mechanisms. In this chapter, these pieces of the model are combined to map the eight focal participants' shifts in perceptions and practices, and to explore how well the CAMCC accounted for their change journeys (research question three). Section one revisits the indicators, which characterised the three scenarios predicted by the change model, and presents the combined findings for each practitioner in profile matrices. Section two addresses research question four on factors emerging as salient for this cultural context, and which might explain practitioner change journeys that did not fit the model. These factors draw on findings from a thematic analysis of two focus group interviews, which prompted practitioners to share challenges and supports in their working life, as well as key roles and responsibilities that defined their profession.

1. Change scenarios and indicators

In the revised CAMCC (see chapter two, section 5), educational beliefs indicated whether practitioners felt implicated by the training message (i.e., *yes, I'm not using this novel approach* or *no, I'm using this approach already*), while initial efficacy would influence their decision to try the new approach (*'do I have the abilities and resources needed to make a successful effort?'*). The model suggested that beliefs change was more likely for practitioners who reflected more deeply on the new approach (i.e., systematic, deeper processing over surface-level, heuristic processing) and if they were scaffolded to practice in their classroom context. In the support programme, the training message presented was: 'Children learn through play.' This message was not new to the participants; through their previous training to become certified early educators, the importance of play for children's development and learning had already featured, even if the actual application in practice may not have been modelled. The perception questionnaire captured how implicated the focal participants felt: higher, enthusiastic ratings (i.e., *All play* group) was taken as a sign that they felt less implicated (i.e., *'I'm using this approach already'*), and lower, cautious ratings (*Selective* group) that they felt more implicated (*'I'm not using this approach'*). Likewise, their initial teaching efficacy, which would inform judgements of capacity to apply guided play in their classrooms, was addressed with efficacy ratings

in this questionnaire. Analysis of the video-stimulated interviews and reflective tasks indicated how deeply practitioners reflected on their practice with children. Finally, changes in their beliefs were mapped through interviews conducted early and later in the study. Classroom practices were not originally part of the CAMCC, but since this aspect was central to the study, practice changes were included in the profiles.

1.1 Revisiting the three change scenarios

Drawing on the CAMCC and extant literature, three change scenarios were originally envisioned in chapter two of this thesis (see section 5.1). Below, these scenarios are revisited with indicators, informed by previous chapters, added to their descriptions:

Scenario A: Unconcerned

- **At the training**, the trainer conveys the programme message 'Children learn through play.' The practitioner considers '*Am I implicated?'* and decides *'No, I'm already using play in my practice.'* Being unconcerned, the practitioner processes all training information (incl. practice modelling) at a surface level (heuristic processing).
- **In practice**, the practitioner feels confident that little needs to change and continues more or less as before.
- **Scenario indicators:** alignment with programme message (i.e., *All play* group), mainly performance orientated reflections (PO), and little to no beliefs and practice change. Efficacy ratings are likely to be high.

Scenario B: Avoidant

- **At the training**, the trainer conveys the programme message 'Children learn through play' and the practitioner feels implicated (i.e., '*Yes, I'm not really using a playful, child-led approach'*). While the trainer explains and models, this practitioner grows convinced that the approach is not possible in own context (low initial efficacy) and processes the information at a surface level (heuristic processing).
- **In practice**, the practitioner avoids using a play-based approach.
- **Scenario indicators:** less alignment with programme message (i.e., *Selective* group), mainly performance orientated reflections (PO), together with some struggling orientated reflections (SO) and lower efficacy ratings.

Scenario C: Adopting

- **At the training**, the trainer conveys the programme message 'Children learn through play' and the practitioner feels implicated (i.e., *'Yes, I'm not really using a playful, child-led approach'*). While the trainer explains and models, this practitioner decides that the approach is worth a try and has confidence in own abilities (high initial efficacy). S/he seeks to understand principles and implications in greater detail (deeper, systematic processing).
- **In practice**, s/he tries the new approach, gaining confidence through practice and feedback from mentor and peers, and from the children themselves.
- **Scenario indicators:** alignment with programme message (i.e., *All play* group), some meaning-orientated reflections (MO), higher initial and ongoing efficacy, together with beliefs and practice changes in favour of a child-centred, play-based approach.

1.2 Combining findings for each practitioner

At the end of findings chapters four and five, summaries were made of the South African practitioners' educational beliefs (i.e., their cluster membership, themes in play and learning perceptions and in conceptions of their own educator role and of learners' role), their initial and ongoing efficacy, and their classroom practices over time. In this section, these separate tables are combined into profiles for seven practitioners, who had complete data for their educational beliefs: Maude (P1), Anele (P2), Fikile (P3), Lihle (P5), Liyanda (P6), Thembi (P7), and Martha (P8). For Lisa (P4), interview data later in the study were missing. Below, the seven profiles are addressed in turn, describing practitioners' starting point and changes over time, and with findings held against indicators for the three scenarios. The practitioner cases are ordered, so that those resembling the *Unconcerned* scenario come first, followed by *Avoidant* and *Adopting* scenarios.

1.2.1 Unconcerned scenario: Fikile

With higher ratings on the perception questionnaire (except for a play perception score of 4 for *Ring time* activities, see Table 22 in chapter four), Fikile was in the *All play* group, and as such, more aligned with the programme message (see Table 62). Fikile's alignment with the programme message was not reflected in beliefs expressed when she commented on videos of her own practice: her perceptions of

learning, including in play, were rooted in correctness, just as her own role was a knowledgeable authority in charge of immature learners. Over time, these educational beliefs were stable, which Fikile's higher sense of initial teaching efficacy (5.4 out of 6), and ongoing efficacy (5 out of 6) might account for. In addition to a dominant reflective orientation of performance, her early orientation was characterised by a relatively high amount of struggling statements (14%) but this number had dropped to 5% at end point.

Table 62: Fikile's combined findings

Educational beliefs		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings, more aligned)	-
Learning perceptions	Reproducing	Reproducing (performing)
Learning in play perceptions	Performing	Reproducing - performing
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO) (14% struggling)	Performance (PO) (5% struggling)
Initial teaching efficacy	High (5.4)	-
Efficacy for teaching through play	High (5)	High (5)

Teaching practice			
	Starting point		**End point**
Educator role in play (% of time)	Guiding play (12%) Managing play (28%)	Guiding play (0%) Managing play (0%)	Guiding play (0%) Managing play (0%)
Teaching style overall	Mixed style (directive / withdrawn)	Mixed style (directive / withdrawn)	Mixed style (directive / withdrawn)
Teaching style in play activities	Facilitative: 1.6 Directive: 2 **Withdrawn: 4**	Facilitative: 1.6 Directive: 1.25 **Withdrawn: 4.67**	Facilitative: 1.4 Directive: 2.75 **Withdrawn: 5**
Teaching style in adult-led activities	Facilitative: 1 **Directive: 5** Withdrawn: 1.33	Facilitative: 1.2 **Directive: 4.75** Withdrawn: 1	Facilitative: 1 **Directive: 5** Withdrawn: 2

Overall, Fikile rarely engaged with children during play, as indicated with the little time spent guiding and managing play. Her teaching style shifted between being highly directive during adult-led activities and withdrawing during play. Over time, this tendency became more pronounced. All in all, Fikile's case resembled the *Unconcerned* scenario: alignment with programme message (i.e., not feeling implicated), mainly performance orientated reflections, high initial and later teaching efficacy, and little to no beliefs and practice changes.

1.2.2 Avoidant scenario I: Maude

Maude was in the *Selective* group, with lower overall ratings of activities children might do as both play and learning (see Table 63). She mainly perceived correct answers and performance as signs of learning; these perceptions chimed with her conceptions of children as immature learners, and her own educator role of being a knowledgeable authority. Over time, Maude's beliefs remained largely unchanged. In terms of reflective orientation, she had a mix of struggling and meaning-oriented statements. In interviews, Maude expressed concerns, anxiety and sometimes blamed children for unexpected events (struggling orientation), and this resonated with her initial lower sense of efficacy. Taken together, Maude's profile fitted the *Avoidant* scenario (*Selective* group, mainly performance orientated reflections with some struggling-orientated reflections and lower efficacy ratings). Her approach to teaching and supporting play presented an intriguing contrast. In her practice with children, Maude was involved in children's play and guided their efforts both early and later in the study. Over time, her teaching style and role in play fluctuated between facilitating and directing children, and yet a somewhat facilitating style was most dominant for Maude. In other words, her traditional beliefs about play and learning, children as learners and her own educator role did not appear to align fully with Maude's teaching practices. Summing up, neither Maude's practice nor her beliefs changed towards being more in favour of child-centred, play-based practices, but then her practices were already to some extent aligned with the approach advocated for by the in-service support programme. The practice fluctuations seen for Maude could suggest that other personal and contextual factors were at play.

Table 63: Maude's combined findings

Educational beliefs			
	Starting point		**End point**
Cluster membership	*Selective* group (lower ratings, less aligned)		-
Learning perceptions	Reproducing		Reproducing (performing)
Learning in play perceptions	Performing		(no statements)
Educator role conception	Font-of-knowledge		Font-of-knowledge
Learner role conception	Children as immature		Children as immature
Change mechanisms: efficacy and reflective orientation			
	Starting point		**End point**
Reflective orientation	Performance (PO) (25% meaning – 12% struggling)		Performance (PO) (27% meaning – 9% struggling)
Initial teaching efficacy	Middle (4.8)		-
Efficacy for teaching through play	(none given)		(none given)
Teaching practice			
	Starting point		**End point**
Educator role in play (% of time)	Guiding play (57%) Managing play (0%)	Guiding play (0%) Managing play (0%)	Guiding play (58%) Managing play (35%)
Teaching style overall	Facilitative style	Mixed style (facilitative / directive)	Facilitative style
Teaching style in play activities	**Facilitative: 3.6** Directive: 1.25 Withdrawn: 2.33	Facilitative: 2.8 **Directive: 3.25** Withdrawn: 2.00	**Facilitative: 3.8** Directive: 1 Withdrawn: 2.67
Teaching style in adult-led activities	**Facilitative: 4.2** Directive: 2.5 Withdrawn: 1	**Facilitative: 3.6** Directive: 3 Withdrawn: 1	**Facilitative: 3.6** Directive: 2.5 Withdrawn: 1.33

1.2.3 Avoidant scenario II: Anele

Anele was another member of the *Selective* group and so rated child activities lower on play and learning than her peers; this pointed to Anele aligning less with the programme message at the outset (see Table 64). Like Maude, her educational beliefs tended towards traditional notions of teaching, and yet with a diverging mix: Anele preferred adult-defined correctness (reproducing and performing) as a sign of learning, but also sought to empower children; initially, she viewed her role to be a facilitator and a font-of-knowledge, just as her view of children as immature learners was combined with occasionally recognising their actions and thoughts as reasoned.

Table 64: Anele's combined findings

Educational beliefs		
	Starting point	**End point**
Cluster membership	*Selective* group (lower ratings, less aligned)	-
Learning perceptions	Reproducing (empowering)	Reproducing
Learning in play perceptions	Reproducing / performing	(no statements)
Educator role conception	Facilitator (occasionally Font-of-knowledge)	Font-of-knowledge
Learner role conception	Children as immature (occasionally reasoned)	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO) (5% meaning)	Performance (PO) (12% struggling)
Initial teaching efficacy	Middle (4.6)	-
Efficacy for teaching through play	(none given)	High (5)
Teaching practice		
	Starting point	**End point**
Educator role in play (% of time)	Guiding play (0%) Managing play (0%)	Guiding play (3%) Managing play (52%)
Teaching style overall	Withdrawn style (some directiveness)	Mixed style (directive / withdrawn)
Teaching style in play activities	Facilitative: 2.2 Directive: 2.5 **Withdrawn: 3**	Facilitative: 2.6 Directive: 1 **Withdrawn: 4**
Teaching style in adult-led activities	Facilitative: 2.4 Directive: 2.75 **Withdrawn: 3.33**	Facilitative: 1.6 **Directive: 4** Withdrawn: 1

Over time, Anele's beliefs became more firmly anchored in a traditional teaching notion. This shift coincided with lower initial efficacy and struggling-orientated reflections emerging towards the end of the study, even if Anele's later efficacy for teaching the curriculum through play was indicated as high (5 out of 6). Anele did appear to change from a more withdrawn style overall and in play to being more involved but in a directive sense, rather than adopting a facilitative role. These changes from being less involved and seeing her own role as supporting children to becoming a more traditional educator – in beliefs and practices – made Anele a unique case. From her manner of assuming children's learning in general and in play (see section 4.4 in the previous chapter), and few instances of meaning-orientation

(5% at visit 1, none at visit 2) suggested she was less inclined to reflect deeply on her practice; and yet, changes in her beliefs and practices, along with struggling statements at the second visit, could indicate a growing concern with her own teaching. These indicators overlapped mostly with the *Avoidant* scenario, though Anele's case could also be a 'counter' change scenario.

1.2.4 Avoidant scenario III: Liyanda

Liyanda aligned with the programme message of children learning in play (*All play* group, see Table 65). Her practice-near beliefs were more traditional in that she favoured correctness as signs of learning, described her own role in font-of-knowledge-terms and children as mostly immature learners; that said, Liyanda was less concerned with children giving correct answers, and more with them being active learners, who performed activities as she instructed. Her initial reflective orientation focused on performance, with a few meaning-orientated statements (4%). This changed over time to be characterised more by struggling statements (14%), just as Liyanda's sense of teaching efficacy dropped from early to later in the study. Liyanda's practice also fluctuated over time, moving from a distinctly withdrawn style towards a mixed style with elements of withdrawing and directing mostly, though she also grew more facilitative in her style during play activities.

Considering these indicators, Liyanda's case initially looked like the *Adopting* scenario: alignment with the programme message, higher efficacy at start and practice shifting towards a play-based approach; however, her final efficacy rating was lower (4 out of 6), just as her practice became a mix of withdrawing and directing when interacting with children. These changes coincided with more struggling statements, suggesting an *Avoidant* scenario instead. Equally, Liyanda's beliefs remained unchanged from early to later.

Table 65: Liyanda's combined findings

Educational beliefs – Liyanda*			
	Starting point		**End point**
Cluster membership	*All play* group (higher ratings, more aligned)		-
Learning perceptions	Performing		Performing
Learning in play perceptions	Reproducing (performing)		Performing (reproducing)
Educator role conception	Font-of-knowledge		Font-of-knowledge
Learner role conception	Children as immature (occasionally reasoned)		Children as immature
Change mechanisms: efficacy and reflective orientation			
	Starting point		**End point**
Reflective orientation	Performance (PO) (4% meaning)		Performance (PO) (14% struggling – 10% meaning)
Initial teaching efficacy	High (5.5)		-
Efficacy for teaching through play	High (5)		Middle (4)
Teaching practice			
	Starting point		**End point**
Educator role in play (% of time)	Guiding play (0%) Managing play (0%)	Guiding play (36%) Managing play (23%)	Guiding play (0%) Managing play (0%)
Teaching style overall	Withdrawn style	Mixed style (withdrawn / directive)	Mixed style (withdrawn / directive)
Teaching style in play activities	Facilitative: 1.6 Directive: 2 **Withdrawn: 5**	Facilitative: 2.8 Directive: 1 **Withdrawn: 4**	Facilitative: 2.4 Directive: 1.75 **Withdrawn: 4**
Teaching style in adult-led activities	Facilitative: 2 Directive: 2.75 **Withdrawn: 3.33**	Facilitative: 2 **Directive: 3.25** Withdrawn: 1.33	Facilitative: 1.8 **Directive: 3.5** Withdrawn: 3

1.2.5 Avoidant scenario IV: Thembi

With lower ratings for ring and choice time activities, Thembi was the final member of the *Selective* group, and hence less aligned with the programme message (see Table 66). Apart from some recognition of learning as applied understanding, she also preferred correct answers and performance as signs of children learning, saw her own role as a font-of-knowledge and children as immature. The only beliefs shift observed was a greater focus on performance in play, with children being active learners, than earlier in the study.

Table 66: Thembi's combined findings

Educational beliefs		
	Starting point	**End point**
Cluster membership	*Selective* group (lower ratings, less aligned)	-
Learning perceptions	Reproducing	Performing
Learning in play perceptions	Reproducing (performing – understanding)	Reproducing – performing
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO) (17% meaning – 5% struggling)	Performance (PO) (23% meaning – 12% struggling)
Initial teaching efficacy	Middle (4.6)	-
Efficacy for teaching through play	High (5)	Middle (4)
Teaching practice		
	Starting point	**End point**
Educator role in play (% of time)	Guiding play (22%) Managing play (77%)	Guiding play (8%) Managing play (88%)
Teaching style overall	Mixed style (facilitating / directing)	Mixed style (facilitating / directing)
Teaching style in play activities	**Facilitative: 4** Directive: 1.25 Withdrawn: 3	**Facilitative: 4.6** Directive: 1 Withdrawn: 1.67
Teaching style in adult-led activities	Facilitative: 2.2 **Directive: 4.25** Withdrawn: 1.67	Facilitative: 1.4 **Directive: 4.75** Withdrawn: 1.33

Thembi's reflective orientation highlighted performance, but she had meaning and struggling statements as well, suggesting she considered underlying reasons for own actions, and occasionally those of children. However, Thembi's teaching efficacy did not increase over time. At study start and end, she was among the lowest with ratings of 4.6 and 4. In practice, Thembi was very engaged with children, though she tended to switch between facilitating and directing. Over time, this mixed approach continued with a slightly more managing role in adult-led activities, and an increasingly facilitating style in play activities. Her directiveness in adult-led activities was marked throughout. Thembi's combination of less alignment at study start, little change from traditional notions of teaching and child learning, lower efficacy ratings and struggling

statements, meant her case resembled the *Avoidant* scenario. She did use practices in line with a play-based approach, but mixed with directing. This could indicate that Thembi saw a need for change in her practice, without having the motivational resources needed to realise her ambition.

1.2.6 Adopting scenario I: Lihle

Lihle was in the *All play* group, and her ratings of both *Ring* and *Choice time* activities were high (6 out of 6). Comparing across the group, Lihle had educational beliefs most in line with child-centred, play-based approaches at the outset (Table 67). Lihle's preference was for children's empowerment and applied understanding over correctness as signs of learning, though in play, she reverted to correct performance. She mostly articulated her role as a facilitator on more mutual terms with children. Over time, Lihle's teaching conceptions saw a curious shift: her facilitating role later had elements of being a font-of-knowledge, while her view of children shifted from somewhat immature to reasoned in their thoughts and actions. Then, Lihle stood out with a pronounced meaning-orientation (40% and 33%). She was inquisitive and wondered about her practice and children; her teaching goals extended beyond the classroom to empowering children for social change, just as she emphasised a more mutual relation with children throughout. Her sense of teaching efficacy was very high from the start (5.4 and 6 out of 6) and stayed high towards the end (5 out of 6).

Over time, Lihle became more involved in children's play, though trending towards a managing rather than guiding role at study end. As the only one in the group, her overall teaching style remained facilitative from start to end. These indicators taken together, Lihle best resembled the *Adopting* scenario: alignment with programme message (i.e., All play group), meaning-orientated reflections, higher initial and ongoing efficacy, and a growing recognition of children as reasoned learners. On practice change, her educator role did shift from not involved in play to both guiding and managing children's play. Even so, her learning perceptions and conception of own teaching role shifted in the opposite direction over time.

Table 67: Lihle's combined findings

Educational beliefs			
	Starting point		**End point**
Cluster membership	*All play* group (higher ratings, more aligned)		-
Learning perceptions	Empowering (understand – performing)		Performing
Learning in play perceptions	Performing (understanding)		Reproducing (understanding)
Educator role conception	Facilitator		Facilitator (occasionally Font-of-knowledge)
Learner role Conception	Children as immature (and as reasoned)		Children as reasoned
Change mechanisms: efficacy and reflective orientation			
	Starting point		**End point**
Reflective orientation	Meaning (MO) (40% performance)		Performance (PO) (33% meaning)
Initial teaching efficacy	High (5.4)		-
Efficacy for teaching through play	Very high (6)		High (5)
Teaching practice			
	Starting point		**End point**
Educator role in play (% of time)	Guiding play (0%) Managing play (0%)	Guiding play (20%) Managing play (8%)	Guiding play (4%) Managing play (40%)
Teaching style overall	Facilitative style	Facilitative style	Facilitative style
Teaching style in play activities	**Facilitative: 3.6** Directive: 1 Withdrawn: 2.33	**Facilitative: 3.2** Directive: 1.25 Withdrawn: 3.33	**Facilitative: 4.2** Directive: 1 Withdrawn: 1.67
Teaching style in adult-led activities	**Facilitative: 3.8** Directive: 3 Withdrawn: 1	**Facilitative: 3.2** Directive: 2.75 Withdrawn: 1	**Facilitative: 3.4** Directive: 1.25 Withdrawn: 1

1.2.7 Adopting scenario II: Martha

Martha was the final member of the *All play* group, with high ratings of all activities (see Table 68). By contrast, her educational beliefs favoured traditional perceptions of learning as correct answers and performance, the educator as a knowledgeable authority and children as immature and dependant. Over time, these beliefs were stable. Martha was mostly concerned with performance, when reflecting on her practice, and her sense of teaching efficacy started very high (6), with only a slight drop over time (5). From the outset, Martha was active in a managing role during children's play but shifted to slightly more guiding later in the study. Likewise, she had a minor shift from a mainly directive style to a mix of facilitating and directing

during adult-led activities, though instances of withdrawing in play also increased. As such, Martha was a second case resembling the *Adopting* scenario, except for two differences: her lack of meaning-orientated reflections and of beliefs change.

Table 68: Martha's combined findings

Educational beliefs		
	Starting point	**End point**
Cluster membership	*All play* group (higher ratings, more aligned)	-
Learning perceptions	Reproducing (performing)	Reproducing (performing)
Learning in play perceptions	Reproducing - performing	Reproducing (performing)
Educator role conception	Font-of-knowledge	Font-of-knowledge
Learner role conception	Children as immature	Children as immature
Change mechanisms: efficacy and reflective orientation		
	Starting point	**End point**
Reflective orientation	Performance (PO)	Performance (PO)
Initial teaching efficacy	High (5.4)	-
Efficacy for teaching through play	Very high (6)	High (5)
Teaching practice		
	Starting point	**End point**
Educator role in play (% of time)	Guiding play (0%) Managing play (54%)	Guiding play (24%) Managing play (39%)
Teaching style overall	Mixed style (directive / facilitative)	Mixed style (directive / withdrawn)
Teaching style in play activities	**Facilitative: 2.8** Directive: 2.75 Withdrawn: 1	Facilitative: 2.6 Directive: 2 **Withdrawn: 2.67**
Teaching style in adult-led activities	Facilitative: 1.8 **Directive: 4.5** Withdrawn: 2.33	Facilitative: 3 **Directive: 3.25** Withdrawn: 1

1.3 Concluding on practitioner change journeys

Among the seven practitioner journeys summarised above, four cases fitted the envisioned change scenarios best. Fikile exemplified the *Unconcerned* scenario by aligning with the programme message, mainly reflecting on performance, having high teaching efficacy ratings from start to end, and little change in beliefs. It is important to clarify that the *Unconcerned* scenario holds two possibilities: either practitioners

already use the target practice or, as Gregoire implies (2003), they do not notice discrepancies between their current practice and those advocated by training messages and activities. In Fikile's case, she did not use play-based approaches in her classroom, suggesting the second option for this scenario. Thembi's case followed the *Avoidant* scenario by combining less alignment with the training message at study start, little beliefs change over time, lower efficacy ratings throughout and struggling statements in her reflective orientation. That said, Thembi was very engaged with children during play, though her style was directive during adult-led activities.

For the third scenario, *Adopting,* Lihle was the clearest example. At study start, she aligned with the programme message, had high initial efficacy, which stayed high from early to later in the study, and she reflected deeply on her practice with children. Her beliefs about children as reasoned learners became more pronounced over time; however, her learning perceptions and conception of own teaching role shifted towards more traditional notions. Liyanda's case was especially interesting in that she appeared to switch between scenarios. From the outset, she fitted the *Adopting* scenario by aligning with the programme message, having higher initial efficacy, just as her practice shifted towards a more facilitating style, also in play; however, her later efficacy rating was lower (4 out of 6), and her practice became a mix of the withdrawn and directive styles. These changes coincided with Liyanda having more struggling statements, suggesting an *Avoidant* scenario instead. With efficacy as a change mechanism, the CAMCC does account for such scenario switching. The remaining three practitioners' change journeys did not fit either scenario neatly: Maude, Anele and Martha. Their cases are considered next.

1.3.1 Journeys that did not fit the CAMCC

In Maude's case, her membership of the *Selective* group, educational beliefs and reflective orientation all pointed towards the *Avoidant* scenario, and yet her style of teaching was facilitating at the start and again at the end of study; in between, she shifted to a distinctly directive style, while her educational beliefs were unchanged. When reviewing the change indicators for her case, Maude was relatively reflective (27% and 25% meaning-orientated statements, respectively) with lower initial efficacy (4.8). As she did not give efficacy ratings on the reflective tasks, her later judgement of own ability to teach the curriculum through play was unclear. Then, these practice

fluctuations could also be due to personal and contextual factors not captured by the CAMCC. Another curious case was Anele's change journey. Over time, Anele shifted in both her educational beliefs and practices but away from favouring child-centred approaches and towards more directive teaching beliefs and practices. These shifts were coupled with few meaning-orientated statements, and with struggling statements emerging later. Hence, Anele could be a counter case: initially, she felt unconcerned, trusting that children would learn in play, and habitually adopted a somewhat facilitating style. After participating in the programme, Anele may have begun to consider her practice more deeply, leading to growing concern, and reverting to a more traditional stance. In the final case, Martha's teaching style changed from mostly directive to a mix of facilitating and directing children, and yet a corresponding shift did not occur for her beliefs. Along with her entirely performance-focused reflection, Martha's case did not fit either of the three change scenarios described by the CAMCC.

1.3.2 Cases of contrasting beliefs and practices

In three cases highlighted above, practitioners' styles of teaching were not reflected in their educational beliefs. Maude shifted from facilitating to directing and back to facilitating, while her beliefs were stable throughout the study; these beliefs were firmly rooted in learning as correctness and her own position as a knowledgeable authority. Martha started out with a mostly directive style and changed over time to mixing facilitating and directing, while her beliefs were unchanged. Again, her beliefs favoured correctness and an educator role of being a font-of-knowledge. Lastly, Thembi also held traditional beliefs, while her practice had clear elements of engaging with children and facilitating, including in play. In two other cases, namely Anele and Lihle, their practice-near beliefs about teaching and children's learning seemed to revert from favouring a mutual relation with their learners and move to preferring a more hierarchal relation, as well as correct performance. In these cases, the practice starting point was a more withdrawn role, and over time, they changed to being more involved, even over-involved in terms of directiveness.

In the three first cases referred to here, traditional notions of teaching were stable: Maude, Martha and Thembi. In the last two cases, Lihle and Anele, traditional practices appeared to surface over time. These surprising shifts raise questions of how practitioners' educational beliefs and practices were related, keeping in mind

that all eight participants espoused beliefs in favour of play as important for children's learning. Other questions concern practice demands educators face when they are presented with child-centred, play-based practices during professional development.

1.3.3 Salient factors emerging to inform the CAMCC

Returning to the practitioners' training backgrounds, all had been part of TREE's certification programme, which emphasised play-based practices, as did the in-service programme they were now part of. In this sense, the focal practitioners had long been surrounded by play-based practices and messages. And yet, this did not necessarily translate into beliefs change. One explanation could be the brief snapshots of practice, which were captured in the study (see also section 1.2 in chapter seven). Another explanation, suggested by the findings so far, could be the practitioners' own manner of reflecting on professional practice, and especially on play as a learning context. Several in the group demonstrated meaning-oriented reflections. However, their reflections were not always concerned with play-based approaches to teaching. In other words, they were clearly capable of reflecting, although they may not have felt cause to reflect on their implementation of playful practices. Certainly, few instances of dissonance were evident from the thematic analysis of play perceptions and notions of children's learning in play (chapter four, section 4), and from the reflective tasks, which asked most directly about practitioner confidence to teach the curriculum through play (chapter four, section 7.2). Findings from each of these sources indicated a performance focus with play seen as a stage where children demonstrated their current state of development, as well as their aptitudes and proficiency with adult-roles and curriculum content. A few practitioners noted how children could exchange and learn from peers in play, but overall, play was not perceived as a context for them to improve, explore and master (see section 5.1 in chapter four). These were intriguing findings, and could be due to several context factors: demands in their working environment, cultural perceptions and guidance from supervisors and other figures of authority. Or perhaps their practices were more habitual than reflective, and followed certain shifts over the course of the reception grade year. In short, questions remained on the practitioners' notion of professionalism, and what factors they identified as helping and hindering their daily work (research question four). The next section addresses this fourth research question by delving into findings from the two focus group interviews conducted with practitioners towards study end.

2. Findings from the focus group analysis

Data sources and analyses presented so far have mapped constructs and change journeys according to the CAMCC. With the analysis of focus group responses, the purpose was to look beyond the change model, shifting the perspective to those aspects of practice, which concerned the South African practitioners most. Findings from this analysis sought to capture notions of being an early educator that were shared by the group, along with factors they identified has helping and hindering their professional work. Three themes on professionalism emerged, which referred to practitioner responsibilities, values and appropriate ways of engaging directly with children. In the first theme, *caring for children*, practitioners were providers meeting young children's needs, including for nurture, food and protection. The second theme, *teaching and managing play*, described how they strove to educate their learners and manage playtime. The final theme, *self-sustaining practices*, seemed to underpin the first two themes through addressing necessities of working in contexts of minimal support. This theme captured responsibilities that practitioners took upon themselves, and resources they used, in order to sustain their livelihood and children's access to care and education.

2.1.1 Theme one – caring for children

Professional childcare was a prevalent theme in the data, with 97 statements referring to practitioners providing for children's needs, along with a strong emphasis on love and nurture, safeguarding, and ensuring their healthy development (57 in the City B group, 40 in the City A group). Nurturing entailed many practical aspects, including supervising children, ensuring their safety in a clean environment without hazards, and that children did not harm one another. Practitioners described helping them with toilet visits and nappies, feeding and minding children. In the morning, as children arrived and were 'handed over' to the class, practitioners had a duty to check their 'condition' – whether the child was healthy or ill, needed changing or was hungry. One practitioner summed-up her work as follows:

"I, as a teacher, the first thing I do is prepare – after preparing, I give them love and also take care of them. I do not push them away from my space but love them. I also look after them and listen to what they say. I think all this falls under caring." (City B group, p. 5).

As shown in this example, statements under this caring theme were characterised by devoted, affectionate and even family-like language with practitioners calling themselves parents in school and feelings of being responsible for children's welfare:

"I also tell them that 'my friends, you are important, you are all important and I love you all, as we are seated in a circle, we are all friends and we share and give each other love – we are all sisters and I am your mother, you will see your real mother in the afternoon and I am your mother here at school.'" (City A group, p. 4).

During interviews, practitioners shared stories of severe accidents to children at their ECD sites and at home – medical care was both costly and far away, making safeguarding of children a prominent part of their work. Inclusion and acceptance of all children, regardless of disabilities and family background, was another central aspect of the care theme. All practitioners remarked having disabled children in their classrooms and this appeared to occupy both their time and concerns greatly:

"I give my children love, and I also take care of them, I do not give preferential treatment, even if there is a child that has some disabilities, I make them all feel the same like others, avoiding that it should be treated differently." (City B group, p. 6).

"I have a disabled child that crawls. When other children play, we sometimes take him – he has a soft body, but he is four years old – when we go to play anything, I sometimes take him and put him behind a chair and ask him to jump, he just laughs – but suddenly, he jumped and moved one foot (…). This made me happy for the parent to see that when a child goes to school, it does not mean that when it is disabled, it should be left to sit." (City A group, p. 23).

Part of the focus group interviews prompted practitioners to share stories of recent great and hard days; all their stories of 'a great day' (and some stories of worst days) were about disabled children suddenly progressing, as in the case above. In their efforts to care for all children's welfare, practitioners drew on several sources and factors in their context. Across the whole group, these factors acted as supportive to their work: personal capacities, children, educational toys and materials, colleagues, and parents. Church and practitioners' local community were present as implicit sources of support, rather than described in any detail.

On the first factor, practitioners noted how their capacity for caring for children sprang from love and a natural affinity:

"Everyone at home and in the community saw me as a children's lady – at home, you would always find children playing with me, even though I do not have my own. They used to visit me at home when I was still a school goer, the little ones liked to come and hang around me all the time. Eventually, I realised I can do this." (City B group, p. 8).

Practitioners saw themselves as more approachable for children than other adults; typically, family, neighbours or a community leader (e.g., a pastor) had noticed their caring potential and either left children in their care or urged them to take up the profession. Some had first volunteered in Sunday school or an early learning site, while others came to the profession after having to give up studies or work. Only one practitioner had decided to pursue the profession deliberately – she resigned from her job at a holiday flat company to take care of poor children in her area.

For all stories of entering the profession, love of children was a main motivation and source of capacity: *"With other things, I do just purely from love for the children and when one is dedicated and welcome them in love it becomes easy to work with them."* (City A group, p. 9). Children were cited as a pivotal for their happiness, helping practitioners to put aside worries in their own lives. Children's innocence and affection, their eagerness to listen and learn, to forgive conflicts and grudges, were all part of their enabling aspect: *"It is just that, it is nice being with them – even if you reprimanded them, they forget quickly and they are soon smiling again, and they like giving compliments."* (City A group, p. 44). Instances of sudden progress, especially in disabled learners, was another aspect of children's bolstering influence. Toys and materials were likewise raised as enabling practitioners in their work with caring for children, since these tools allowed them to observe children playing and gauge their state of health and development: *"It makes it easier when you speak with a parent and she tells you that it [the child] is not used to doing this, but you see there is a problem, even if the parent denies that."* (City B group, p. 22). Parents were mentioned explicitly as supportive, but only a few times, while colleagues were enablers through sharing of the workload and looking after children. Many of the factors, which served as supports in the practitioners' work, had negative sides to them as well.

On personal factors, lack of confidence and training in dealing with children's special needs were cited and the groups remarked feeling unprepared and overwhelmed with the responsibility:

"Social workers advise us that we are not doctors, when something is beyond our control, we must inform the parents, even administering Panado [medicine]*, because it might happen that the child drinks it and reacts to it and what will the parent say, she will say 'you made my child drink something' – so we said, let us get the spoon and use it, and see what will happen and that spoon could not be found. You must allow her to fit [epileptic?] until she stops. We were very scared."* (City A group, p. 29).

As in this example, practitioners often spoke of children's parents with caution and distrust, pointing to parents as a key cause of issues, rather than an ally, in their efforts to care for children: *"You find the parent dropping the child at the gate and runs away to work and leaves the problem with you because she realised the seriousness of the case."* (City A group, p. 11). Along with earlier stories of neighbours leaving children with practitioners before they had started their profession, and the emphasis placed on feeding and guarding children, this theme painted a picture of practitioners striving to offer children much needed love and care and struggling under stressful working circumstances, exacerbated by poverty and a tenuous welfare system.

2.1.2 Theme two – teaching and managing play

A second theme, with 91 statements, described practitioners' educational roles in class, where they taught children and acted as managers of their play activities, ensuring order and keeping the play going (40 in the City B group, 51 in the City A group). This theme resonated well with earlier analyses, including themes emerging from individual interviews and videos of educator roles in play (see chapters four and five). For instance, teaching was associated with being an authority imparting knowledge and appropriate manners to children:

"…even when I paint, I draw a circle, he must paint inside the circle and I must teach him, if he has forgotten I must show him again. There are also puzzles at the quiet area as well as books, then you show them how one opens a book so as to make sure he is opening it with the right side up and not make it face down…" (City B group, p.14).

Like in earlier analyses, more mutual relations between adults and children were also expressed: *"One must not be a person who is stiff and tense, but they must be free, when a person is free with children, they easily grasp what one teaches them."* (City A group, p. 16). Teaching topics mentioned during the focus group interview were similar to daily themes noted before, such as transport, explaining to children what to expect in grade one, but also focused on social relations and teaching children to care for each other. Beyond these aspects of teaching, managing and encouraging children during play, practitioners emphasised structure, in the form of their daily programme, as a cornerstone in their professional practice. This programme was a physical chart hanging on the wall in class, with times and activities listed for the entire day. Across sites, daily activities were very similar:

"It is the same as hers. Ok, in the morning, we start with a prayer, after prayer we greet each other, after greetings we do weather chart and days of the week, we count months of the year – what is it I haven't mentioned? Seasons of the year, and mention which season we are in. After that we have a discussion." (City B group, p. 13).

Two more rings or adult-led activities took place during the day with a focus on language learning: during the second ring, practitioners led activities such as singing, dancing or read poems and rhymes; the third ring was stories told either by the practitioner or a child. Between rings, two free choice session took place – one indoor and one outdoor, if possible:

"During free choice, each and every child is free to play wherever it wants to play. You do not choose for them and say 'friends, let us play here' – a person goes where he likes but your eye must constantly be on them…" (City A group, p. 13).

In this manner, classroom practices followed a set structure switching between adult-led learning activities and child-chosen play time; practitioners did not mention either deviating from this plan or coming up with their own activities, and it seemed their notion of teaching as professional practice was closely tied to enacting this structure. A telling example was this next excerpt – a practitioner had invited her learners to perform whatever they liked, and a girl started imitating her teaching:

"She did everything exactly like me until the end. She told a certain group to get up and fetch their bags, another group… Even the supervisor was amazed because I had gone to fetch

her, asked her to come and watch – 'please do not fire me from my job, I ask that I do not lose my job because of this child.'" (City A group, p. 26).

This statement highlights teaching as performing a function over a profession, which requires knowledge, skills and judgement combined. Interestingly, this theme of teaching and managing play also held statements pointing to subtle uncertainties regarding perceptions of play as a learning context. After telling about their ring and choice time activities, the two focus groups were explicitly asked when children played in their practice, and the typical response was:

"We play and learn at the same time – we are always playing. We pretend to be mothers, even if you sing, you don't just stand like this as if you are a river, you go up and down if there is space. We are always playing, all the time…" (City B group, p. 16).

Similar to the thematic interview analysis (see section 2 in chapter four), play was perceived as physically active, joyful and as chosen, at least in that children decided which activity they wanted to join. Notions of child initiative in play, of children setting goals and having choices in what to do or how to solve an activity, were not evident across the groups. And yet, dissonances surfaced in the City A group discussion:

"One day, a person came to assess us, she said 'why is it so quiet, Madam, is this not a school? Maybe this is not a crèche (ECD site]?' Because she had come during story time session, and they were quiet, listening, but truly, truly, they do play."

Here, another practitioner chimed in, saying: *"They do play, but they play more during free choice session."* (City A, p. 15-16). Others noted how children would start playing and cause chaos if a ring activity was disrupted, or that all activities were play except the resting hour. These group exchanges revealed conflicting notions of play and child initiative with some practitioners holding encompassing and less nuanced notions (i.e., 'everything we do is play') and more nuanced notions (i.e., 'they play more during free choice').

For this theme, external factors like colleagues, community and professional training stood out as key enablers, along with toys and educational resources. Unlike for the previous theme, capacity for teaching children and managing play was not seen as innate and given, but rested on specific skills that were built through apprenticeships.

Practitioners described picking up teaching practices from their own experiences of being taught in school, from observing colleagues at Sunday school or ECD sites and from a supervisor guiding them step-by-step. Typically, they were trained and certified after some years of volunteering. Colleagues, who had attended training off-site, would be asked to train the rest of the staff and pass on what they had learned:

"This is what happened at our association, which took teachers for training. They were being taught values, they completed [the course] and they received certificates. I do not know anything about values. That teacher is close to me and I ask her to teach me about values (…) so that if she were to leave, she will not leave with the crèche's treasure." (City A group, p. 39).

Training was highly valued by the group but in similar specific veins of learning new activities, songs and games, and new uses for toys:

"We had puppets and we were trained (…) we got motivated and an understanding of their importance, and not only focus on stories in books but we can use puppets and they [children] enjoyed them a lot." (City B group, p. 15).

Being trained was associated with receiving new materials and toys, and with learning how to make them from recycled materials, both of which were assets prized by the groups – in fact, they articulated their own teaching practices as well as children's active engagement and enjoyment, academic and social learning as entirely dependent on having materials: *"It would be very bad, they [children] will remain seated and do nothing, because even myself too, I will not be able to work without these things."* (City B group, p. 25). A few practitioners noted that trainings had helped them to realise misconceptions about teaching, for instance, expecting young children to read and write, but such comments were rare.

Apart from material lack, the groups noted two main factors as hindering to their teaching practices – parents and children. Practitioners felt that parents pressured them to teach academic content earlier and judged their practices unfavourably. Parents were also seen as the reason children were struggling to share and socialise. Some children were presented as hindering through being 'slow learners' and start of term was felt to be uphill: *"Especially in the beginning of the year, everything you try is hard as stone. You try this, it ends up looking like you do not*

know how to teach…" (City A group, p. 44). In the third and final theme, the perspective shifted from direct interactions with children in class, and factors that exerted influence on these practices, and to the organisation of ECD sites as units and self-sustaining enterprises.

2.1.3 Theme three – self-sustaining practices

A total of 51 statements referred to practitioner duties that underpinned or went beyond the immediate care and education of young children in their own classes (19 in the City B group, 32 in the City A group). According to the two groups, their ECD sites included between three and eight staff members and volunteers, counting themselves, caregivers of children under age, cooks and fellow teachers – some had gardeners as well. Practitioners noted how staff worked closely together:

"…we must share ideas, where there are differences, we need to deal with them internally and not to take them to outsiders so that we continue to work as a unit." (City B group, p. 33).

Apart from stepping in to help colleagues, practitioners' work entailed cleaning, preparing meals, shopping for supplies and maintaining the ECD sites:

"I wake up at 4am, at 5am I am already at the crèche and fetch water and start with cooking. By 6 or 7am, the children arrive, and we feed them, as some come hungry (…). I get up on Saturday and I do the washing and hang it. By 6am I go and open the crèche, maybe at 8am I have finished washing and my children help with the washing of the tables. I do not have any problems." (City B group, p. 34).

This excerpt likewise illustrates the spirit of dedication, community and self-reliance, which characterised positive aspects found for this theme. Across the group, practitioners listed four sources of support for sustaining their sites, namely colleagues and community, training, government funds and fees from families. Fellow staff at their sites were a main enabler, since colleagues shared the workload and offered ideas; equally, practitioners were able to make own educational materials with help from children, the community and trainings, allowing them to save costs and have enough materials for all children:

"We don't buy them, they are things which children go around picking (…). We are also learning to use hands and minds and we work with the community to have what our school needs." (City A group, p. 20).

Families paid for children to attend the ECD sites, though not all practitioners insisted on payment if families struggled. Some sites had received funds to buy outdoor play equipment from the Department of Social Development (DSD) or local municipality. Even so, challenges in this theme outnumbered enabling factors, as practitioners shouldered the task of representing the childcare system in more than one sense. Extra workload from the supervisor, families, and the DSD, along with issues associated with adverse settings, were among factors weighing on practitioners in their efforts to sustain a livelihood and offer children access to early care and education. In addition to registering children attending their classes every month, they had to compile lists and documentation, such as birth certificates and children's health status cards, on behalf of the DSD:

"Social workers need this work to be done, they come to inspect the crèche and check how everything is going and we must take the NFD – children that arrived and children that left – all these cause stress, we never find rest." (City A group, p. 41).

This work came on top of administrative tasks associated with being independent businesses, leading the groups to express feelings of stress. Underserved circumstances led to other forms of strain – as described in the first theme of caring for children, accidents were a major stressor. Clearly, children being hurt affected the practitioners greatly, but the ECD sites also had to cover costs of expensive treatments, replace children's lost property, and deal with aggression from families. In one mild example, a child lost his flip-flop sole, and the grandmother came to confront the practitioner:

"She was very angry, there is no bad thing that she didn't say. She even brought in the issue that we are neighbours, it was really bad." Next day, the practitioner managed to find the flip-flop sole and glue it together, appeasing the family but as she continued to share: *"I have not forgotten that incident, even when I handle that child, there is that feeling, I even ask other teachers to be extra careful."* (City A group, p. 31).

Other instances were more severe: children coming to harm, experiencing violence and abuse, being infected with HIV, cases of neglect – all of which were felt heavily by the groups.

2.2 Summary of focus group findings

The thematic analysis of focus group data sought to paint a picture of practitioners' everyday lives and working context. Two themes highlighted children's care and education as key aspects of being a professional, while a third theme captured responsibilities necessary to sustain their ECD sites. These three themes are summarised in this section before the concluding remarks to this chapter address salient factors for the South African cultural context, which might shed light on practitioners' change journeys. In the first theme, *caring for children*, practitioners described duties of nurturing children, attending to their safety and welfare, and ensuring that children were included regardless of disabilities and family background; their efforts to realise this aspect of their profession were enabled by love for children and in-born affinity, by children themselves due to their innocence, affection and signs of progress, by colleagues who shared the workload and recognition from the community; toys and materials also helped practitioners to identify children in need of special care. Parents were not a major source of support; instead practitioners felt mostly hindered by their negligence, demands and aggression, just as they felt unprepared for attending children with special needs.

The second theme, *teaching and managing play*, cast practitioners as educators responsible for children learning and being school ready, and as managers of play. They were equipped through apprenticeships – i.e., observing peers performing this role and being coached by proficient others – and associated success with enacting the daily programme. Play was viewed as a cornerstone practice with their role being to provide opportunities, guide children to play appropriately and keep activities going, but this theme did reveal some uncertainties on what constituted 'children's learning through play.' On enabling factors, toys and materials were indispensable; trainings, colleagues and the local community were helpful in that they presented a source of fresh activities and practical ideas, materials and knowledge. By contrast, parents' demands and the presence of 'slow learners' in their classes hindered the South African practitioners' work.

The final theme, *self-sustaining practices*, described responsibilities beyond children's care and education that were necessary for the ECD sites to function. These included organising work with colleagues and resolving issues internally, administration and maintenance tasks. Heavy duties came from authorities, where practitioners had to compile documentation about children, and others were caused by underserved circumstances. Again, colleagues, training and communities formed supports with funds from families and authorities helping the sites to continue. Then again, parents were identified as a hindering factor, together with demands from authorities, and issues of poverty and adversity.

3. Chapter conclusions

The focus group findings served to highlight factors for this cultural context, which might help to explain cases where the CAMCC did not fit practitioners' change journeys. Several notable points emerged – by identifying three themes on professionalism, along with their related supports and barriers, the analysis showed that practitioners were as much concerned with children's nurture and welfare, as they were with teaching and engaging them in learning through play activities. Likewise, their duties included many tasks beyond care and education, such as maintaining their site, administration and acting on behalf of the authorities. Living and working in underserved circumstances placed further strain on the practitioners. They strove to meet children's basic needs for food and hygiene, even protection, and to include children with special needs. Some of the points, which earlier analysis had suggested as influencing practice, came out in this analysis of focus group data.

In the discussions, practitioners remarked that the start of term was a challenging period, and their perceptions of learning in play focused on children doing activities (see chapter four, section 2.1.4, on changes in practitioner teaching styles over time). So, while the support programme was designed to scaffold practitioners' translation of knowledge about play and child development into practice, together with offering concrete activities to help their implementation, concerns in their immediate context seemed to weigh more heavily with the participants. These centred on children's safety, wellbeing and health, and aligned with a nurturing professional identity. Practitioners did note several gains from attending these trainings; typically, these were tangible (i.e., receiving new play materials and activities, new ways of using existing play materials) over novel perspectives and understandings of being a Grade

R educator. Practitioners' approach to noticing signs of learning in play, their notions of being a teacher, and roles they could adopt, did not seem to either surface or be challenged as part of their training experience (see chapter four, sections 4.3 and 6.3). The clearest finding for the focus group interviews, which speaks to salient contextual influencers of their change journeys, were the many and significant stressors, which participants faced (see section 2.1.3 in this chapter). As the literature on self-efficacy acknowledges, engaging in educational change is demanding (chapter two, section 3); given the focus group insights, it is perhaps not surprising that messages and trainings promoting children's engaged learning through play should drown in the hectic noise of heavy concerns for safeguarding children, minding their health, securing practitioners' own livelihood and ECD sites, completing required paperwork and many more tasks. In the next discussion chapter, these points are addressed more in-depth, drawing on South African and international literatures on professional learning and change.

Chapter seven | discussion, conclusion and implications

In this final chapter, I discuss findings and implications of the study. After reflecting on key limitations in section one, key findings are summarised in section two. Section three discusses insights on practitioners' educational beliefs, teaching efficacy and approach to reflecting on practice (research question one). Classroom practices, including educator roles adopted in play and teaching styles, form the focus of section four (research question two), while practitioners' change journeys and influencing factors are addressed in section five (research questions three and four). The final section six considers implications for future research and practice, including ethics of cross-cultural endeavours. Throughout this final chapter, I draw on South African and international literatures to reflect on the appropriateness of using a change model to describe patterns of professional change in this context.

1. Reflecting on study limitations

This doctoral study was motivated by the potential for play-based practices to promote young children's engaged learning in early education settings, along with concurring challenges of implementation: Across the LEGO Foundation's initiatives in diverse cultures, we had noted how practitioners often struggled to adopt more active, responsive roles in play with young children – instead, they would switch between being a 'font-of-knowledge' and instructor taking the lead in activities and a play manager providing toys, time and space, and withdrawing to observe play. The literature review revealed that this practice pattern was surprisingly common. In some cases, studies found that professional development could support educators to become more facilitative in their practice, though this was not a guaranteed outcome.

A second observation from the LEGO Foundation's programmatic work, which informed the study's research questions, was a misalignment between beliefs early educators expressed about play as promoting learning, and their teaching practices: When asked to share their opinion, early educators could agree with child-centred and play-based practices, while taking directive roles in play activities. Both issues were related to educational beliefs; namely, perceptions about children's learning and

development, play as practice, teaching roles and professional learning – and how these beliefs shaped educators' efforts to realise playful approaches in their classrooms. From the literature reviewed, one promising route was to better understand patterns of educational change (Opfer & Pedder, 2011) and design flexible programmes that might adapt to meet recurring needs and barriers.

From this starting point, I chose to explore a model of change proposed by Gregoire (2003). The study followed eight participants of a training programme, which focused on play-based teaching, and held their change journeys against the model's scenarios. The study's small sample was a definite limitation, in that emerging patterns of change were not explored at scale. Beyond this constraint, this section considers three central limitations, which are important for further research and for the LEGO Foundation's continued work with improving young children's engaged learning opportunities through play: First, the study's predefined (rather than grounded) design and constructs; second, the use of short classroom videos to gauge teaching practices; and third, insights from the incidental third data point, which revealed fluctuating practices.

1.1 Limitations of using a targeted design

From the outset, this mixed-methods study was quite targeted, in that the research constructs and methods, which informed its design, were all predefined using the CAMCC as a conceptual framework (Gregoire, 2003). Each of these constructs originated in North American and European cultural contexts and not all had previously been studied in South Africa. Considering this bias, researchers working in South Africa recommend study designs with more grounded approaches, where participants are authentically involved to validate interpretations of findings and give weight where such is due (Ebrahim & Penn, 2011). In the present case, my rationale for the study sprang from concerns in the LEGO Foundation's programmatic work, and as such, the ambition of developing a diagnostic tool and model of educational change stretched beyond the South African context. The risk of imposing Western views on study data was sought mitigated by triangulating methods and involving cultural experts throughout. Even so, factors influencing change in this cultural context may have been overlooked given the design adopted, and adding debriefing sessions would have allowed participants to challenge and enrich findings further (Creswell & Miller, 2000).

1.2 Limitations on observing changes over time

A second set of limitations concerns the classroom videos recorded. In their original article, Stipek and Byler recommend a minimum of three hours to ascertain the quality of classroom practices (2004, p. 383). For another well-known measure, the Classroom Assessment Scoring System (CLASS), Pianta and colleagues stipulate coding cycles of 15-20 minutes over a day (Pianta, Hamre, & Allen, 2012). Videos recorded in this study were shorter, lasting between 7:40 and 15 minutes. The purpose was not to gauge classroom quality, but to capture the South African practitioners' involvement and roles in play, and their teaching styles. This was done to compare their practices and beliefs about play, learning and teaching. In the study, prescriptive and in-depth approaches were combined to validate findings; for the ECCOM social climate scale, scores were benchmarked against earlier studies (e.g., Lerkkanen et al., 2012). However, the circumstance that videos recorded were short (approx. 10 minutes each) may have obscured some patterns. Research on African early education is still emerging (Serpell & Marfo, 2014), and rich insights might have been gained from longer video observations to contextualise guided play and styles of interacting more fully for this cultural setting. The final limitation I raise in this thesis relates back to the study design.

The original intention for the study was not to collect data on practitioners' classroom practices more than twice; indeed, most methods were just meant to be used twice in order to pinpoint participants' start and end points on their educational beliefs, practices, and reflective orientation. Their sense of teaching efficacy was one exception, given the theorised import of initial and ongoing efficacy (see section 4.3 in chapter two). As it turned out, the revisits conducted in February and March the following year offered valuable insights. For cases where only two datapoints were recorded, practices appeared to have steady trajectories (see section 2.1.4 in chapter five). But the revisits revealed that practices were in fact fluctuating over time. Further, this was not in conjunction with changes in practitioners' educational beliefs. Hence, this third datapoint helped to identify practitioners' context as highly influencing. Concluding on these limitations, I find that using a theoretical framework like the CAMCC to map educator change journeys requires great precision in constructs chosen, how these are measured and with what frequency, along with paying attention to the context in which participants' lives and learning unfold (Opfer & Pedder, 2011).

After the brief summaries of key findings presented below, this need for greater precision and contextualisation, when using the change model, underpin discussions in the chapter's remaining sections.

2. Summarising key findings

Building on research investigating teacher beliefs, self-efficacy, and dual-process theories, Gregoire (2003) proposed the CAMCC to determine the likelihood of educators meeting a pedagogical innovation with unconcern, as a threat to be avoided, or as a challenge they felt capable of tackling and adopting in their own context. In this study, I adapted the model to play-based practices and applied it in the context of a professional development programme promoting children's learning through play in South Africa. Hence, the study used the model's indicators to explore if mapping the change journeys of eight focal participants was feasible, and whether their journeys followed the model's envisioned change scenarios. Below, key findings are summarised for each of the four research questions.

2.1 Key findings for research question one

This question asked about changes in practitioners' educational beliefs (i.e., their perceptions of play and learning, and conceptions of teaching), teaching efficacy and reflective orientation initially and later in the study.

2.1.1 Practitioners' educational beliefs

Practitioners were revealed to hold encompassing perceptions, where all kinds of activities counted as play, including structured activities led by adults. Across the group, thematic analysis of interviews found that good play was vigorously active, joyful and chosen. For some, good play required abundant toys and space to prevent conflict among children and to ensure that their play choices were not constrained. In turn, these choices showed children's aptitudes. As signs of learning, most favoured correct answers and children performing activities appropriately. Exceptions were Lisa, Lihle, and Anele, who initially highlighted coping and understanding as important too. On learning in play, all practitioners preferred overt demonstration of content knowledge. Play's potential as a context for children to grow in understanding and to set and pursue own goals was less noticed by the group. Five practitioners, Maude, Fikile, Liyanda, Thembi and Martha, all placed emphasis on learning as correctness, saw themselves as Fonts-of-knowledge and children as more immature,

impulsive and dependant learners. Anele and Lihle had some elements of viewing the practitioner role as a facilitator and children as reasoned. Over time, these beliefs were stable, apart from Lihle and Anele who later veered towards notions of learning focused on correctness.

2.1.2 Efficacy for teaching, including through play

On initial efficacy for teaching, three practitioners had mean scores below 5 on a scale from 1-6: Maude, Anele and Thembi. Five had scores above 5: Lisa, Fikile, Lihle, Martha and Liyanda. Patterns of lower and higher efficacy scores aligned with practitioners' responses to the reflective task on teaching the curriculum through play. Over time, Martha, Fikile and Lihle retained their high sense of efficacy. Lisa, Liyanda, and Thembi's scores on efficacy for teaching through play decreased, just as these practitioners noted issues of implementing play-based practices.

2.1.3 Practitioners' reflective orientations

Participants in the study had instances of all three reflective orientations: performance, meaning and struggling. The first orientation predominated. Over time, instances of struggling increased and the percentage of statements coded as meaning-oriented diminished overall. Martha was a clear case of performance-orientation, while Maude, Lisa and Lihle were the clearest examples of meaning-orientation, followed by some instances observed for Thembi, Anele and Liyanda. Fikile and Martha had no statements coded as meaning-orientation. Fikile had a relatively high percentage of struggling statements, especially for the first visit. For both time points, Maude and Thembi showed mixed orientations, as did Liyanda at the second time point.

2.2 Key findings for research question two

Research question two asked about practitioners' style of interacting with children, their role in play, and how both aspects of practice shifted over time.

2.2.1 Educator involvement and roles in play

The thematic analysis of play activity videos found three practitioner roles in play. The most common was managing play, where practitioners circulated between play centres and asked children about their activities to keep the play going. This was not a form of guided play according to the set criteria (i.e., enriching the play context). On

more guided forms of play, two distinct roles emerged: initiating and extending play. The first role meant a practitioner introduced a new activity or element to children's existing play scenario and then let them take over. When extending play, they asked more open-ended questions, modelled and helped children to explore and make use of materials. From study start to end, three practitioners changed their educator role from not being involved to taking an active role in children's play (including managing play): Anele, Lihle and Martha. Maude also became more involved but did so by adding elements of managing play to an already responsive role of guiding children's efforts. Thembi shifted from some instances of guiding, and many instances of managing children's play, to adopting an even more managing role. Finally, Liyanda and Fikile had no discernible instances of either educator role in play at study end.

2.2.2 Practitioners' teaching styles

Practitioners' teaching styles in adult-led and play activities were captured using the ECCOM social climate scale. In the South African version of this scale, a facilitating style reflected a responsive and warm approach where children had opportunities to contribute and expand their understanding through engaging activities. A directive style meant the adult dominated through controlling discussions and favouring correct answers, while children were more passive and tasks less flexible. The withdrawn style denoted an under-involved practitioner, who gave little guidance and tended not to notice children's efforts or needs. In line with findings on educator roles in play, practitioners' teaching styles fluctuated over time, rather than change steadily. Focusing on their dominant styles, five practitioners had minor changes: Maude stayed at moderate levels of facilitation for both activities; Fikile remained withdrawn in play and directive in adult-led activities; Thembi became more facilitative in play and slightly more directive in adult-led; Lihle became slightly more facilitative in play activities, and slightly less so in adult-led activities; finally, Liyanda changed to a less withdrawn role in play, and a more directive style in adult-led activities. The last two practitioners saw more drastic shifts in their practice: Martha became more withdrawn in play, and less directive in adult-led activities. Anele's withdrawn style in play grew more pronounced, and she adopted a directive style in adult-led activities.

2.3 Key findings for research question three and four

With research question three, the separate pieces of the change model were combined to explore how well the CAMCC accounted for emerging change journeys. In light of these findings, research question four asked about personal and contextual factors that might explain cases where the model did not fit.

2.3.1 Comparing change journeys with the CAMCC

Among seven complete practitioner journeys, four cases fitted the envisioned scenarios best. Fikile aligned with the programme message, mainly reflected on performance, had high teaching efficacy from start to end, and little change in beliefs, and so exemplified the *Unconcerned* scenario. Thembi's case followed the *Avoidant* scenario by combining less alignment with the training message, little beliefs change, lower efficacy ratings throughout and struggling statements. Interestingly, Thembi was very engaged with children during play, though her style was directive during adult-led activities. Lihle was the best example of the *Adopting* scenario. She aligned with the programme message, had high efficacy over time, and reflected deeply on her practice with children. Although her beliefs about children as reasoned became more pronounced over time, her learning perceptions and conception of teaching shifted towards correctness. Liyanda appeared to switch between scenarios. From the outset, she fitted the *Adopting* scenario by aligning with the programme message, having higher initial efficacy, just as her practice shifted towards a more facilitating style, also in play; however, her later efficacy rating was lower, and her practice became a mix of withdrawing and directing in her teaching style. These changes coincided with more struggling statements, suggesting an *Avoidant* scenario.

Three change journeys did not fit either scenario well. In Maude's case, her beliefs and reflective orientation pointed towards the *Avoidant* scenario, and yet her style of teaching was facilitating at study start and end; in between, she shifted to a distinctly directive style. Compared to her peers, Maude was reflective but also had lower initial efficacy. For Anele, she shifted in both her educational beliefs and practices but away from favouring child-centred approaches and towards more directive teaching beliefs and practices. These shifts were coupled with few meaning-orientated statements, and struggling statements emerging later.

In the final case, Martha's teaching style changed from mostly directive to a mix of facilitating and directing children, and yet a corresponding shift did not occur for her beliefs. Along with her entirely performance-focused reflection, Martha's case did not fit either of the three change scenarios.

2.3.2 Salient factors: focus group interview findings

The thematic analysis of focus group data revealed three themes on the South African practitioners' sense of professionalism, along with helping and hindering factors in their working context. The first theme, *caring for children*, described responsibilities of nurturing children, attending to their safety and welfare, and inclusion. Practitioners were enabled by love for children and in-born affinity, children's innocence, affection and signs of progress, by colleagues who shared the workload and recognition from the community; toys and materials also helped to identify children in need of special care. By contrast, they felt hindered by parents' negligence, demands and aggression, and by lack of training in special needs. The second theme, *teaching and managing play*, focused on children's learning and school readiness, as well as managing play activities. Proficiency was associated with apprenticeships and enacting the daily programme. Play was viewed as a cornerstone practice where practitioners provided play opportunities, guided child behaviour and kept activities going. Toys and materials were indispensable resources; trainings, colleagues and the local community offered fresh activities and practical ideas, materials and knowledge. Hindering factors included parents' demands and the presence of 'slow learners' in class.

The third theme, *self-sustaining practices*, described duties beyond children's care and education that were necessary for the sites to function: organising work, resolving internal conflicts, and administrative tasks. Heavy workloads came from authorities, and others from their underserved circumstances. Again, colleagues, training and communities formed supports, while parents were a hindering factor. The clearest finding, which speaks to salient contextual influencers of the seven practitioners' change journeys, were the many and significant stressors, which left them feeling overwhelmed; messages and trainings promoting children's engaged learning through play could easily lose sway and relevance when up against such heavy concerns in their working context. A related key finding was that practitioners' sense of professionalism centred on caring for children first and teaching second, just

as their notions of play-based practices revolved around provision for play, and keeping children engaged in play. Across the group, practitioners' approach to noticing signs of learning in play, notions of being a teacher, and roles they could adopt, did not appear to have been surfaced and challenged as part of their training. In line with other findings, these factors highlighted the importance of some adaptation of training programmes, along with greater precision in methods used to operationalise the change model for research. These points are discussed in sections three to six before the thesis concludes with implications.

3. Intricate beliefs about play, learning and teaching

Comparing findings across the study's data sources showed that the South African practitioners had encompassing perceptions of play, where structured and adult-directed activities counted alongside child-managed play. Aronstam and Braund (2016) made similar observations of broad play conceptions when interviewing Grade R educators, as did Marfo and Biersteker (2011) in their review of early childhood research in African cultures. These last two authors conclude that for many educators "…the completion of worksheets and teacher-directed group activities constitute play activity." (p.12). The participants' broad conceptions appear to have influenced the study's exploratory analysis of questionnaire responses: Two perception factors were found, *Ring time* and *Choice time*, which initially resembled Fisher and colleagues' findings of structured, goal-oriented activities in factor one and less structured activities, characterised by imaginative processes, in factor two (2008). During the cluster analysis, however, this resemblance did not hold: two groups, and not three, were identified, and neither group made clear distinctions between *Ring* and *Choice time* activities as being play-like or fostering academic learning. This contrasted with Fisher and colleagues' (2008) results, and especially their *Traditional* group. The thematic analysis of individual interviews offered more insights on the intricacies of participants' understandings of children's participation and agency in play.

3.1 The nature of play: child agency and cultural norms

Three shared themes on the nature of play emerged and in all three, enjoyment was an essential aspect, along with children being active – moving, singing, talking, and acting – and choosing play activities according to their liking. These findings align with previous studies on norms for children's vibrant, active and expressive play in African culture (Marfo & Biersteker, 2011; Harrop-Allin, 2017) and on Grade R

practitioners' conceptions (Mayeza, 2018; Aronstam & Braund, 2016; Shaik, 2016; Shaik & Ebrahim, 2015). In the three play themes, practitioners acknowledged when children enacted realistic scenes from home life and work – as noted in the thematic analysis of educator roles in play (section 1.1.4, chapter five) these observations held an occasional undertone of gender stereotypes. Polarised gender norms are known from research on South African cultural norms (Akala & Divala, 2016; Coetzee, 2001), and extend to notions among practitioners that boys and girls prefer different kinds of toys and play. In a year-long ethnographic study in a Grade R classroom, Mayeza (2018) explored how young children engaged with this dominant gender discourse during 'free play' and how their educators responded. He noted taken-for-granted gender boundaries and reinforcing of stereotypical play behaviour on the part of educators. When asked how they would challenge children's norms of boy and girl play, the Grade R practitioners proposed to move toys and children, rather than taking a participatory approach to engage and challenge children's understandings (Mayeza, 2018).

For the present study, these findings are noteworthy in that child participation and responsive educator roles are central to extant conceptualisations of guided play: scaffolding of children's active involvement and decisions, their meaning-making and imagination form central arguments for play as a learning context (e.g., Weisberg, Hirsh-Pasek, & Golinkoff, 2013; Zosh et al., 2018). In this study, notions of 'child choice' rarely extended to agentic forms of participation. The three play themes did highlight children's opportunities to pursue preferred activities during free choice time, but much less their choices in what to do and how in play; their imaginative efforts were also less recognised, and norms for appropriate play behaviour constrained children's explorations. For instance, educators had firm notions of how play materials should be used, and combining materials across play areas was not permitted. As noted earlier, practitioners mainly cast themselves as play managers who provided time, space and materials for play, and kept children's activities going, though some saw opportunities for engaging and co-playing with their learners. Other observation studies of Grade R classrooms concur: Although children do exert their agency in teaching situations and play, educators are less likely to respond to these initiatives (Shaik & Ebrahim, 2015) or promote children's decision-making (Shaik, 2016; Aronstam & Braund, 2016). These findings suggest an untapped potential for promoting responsive educator roles in this context.

3.2 Perceptions about learning, child and educator roles

In the study, four themes captured what practitioners saw as signs of learning: children reproducing academic knowledge, performing activities appropriately, children understanding and applying what they had learned, and learning as empowering children to become agents of social change. Overall, these themes map onto findings in the literature on epistemological beliefs; for instance, from notions that knowledge is certain, absolute, and imparted by an authority relative to viewing knowledge as tentative, evolving, and constructed by a learner (Brownlee, Fergusson, & Ryan, 2017; Sandoval, Greene, & Bråten, 2016; Hofer & Bendixen, 2012; Olafson, Schraw, & Vander Veldt, 2010; Maggioni & Parkinson, 2008). That educator-centred views dominated in the study aligns with previous South African research. For example, Feza (2016) explored the teaching and learning conceptions of 17 Grade R practitioners by eliciting their understanding of how children learn to count. She concluded that despite sound content knowledge, the practitioners saw overt counting and reproduction of knowledge as signs of learning over gauging children's understanding of number concepts. In a later extension of this study, Tlou and Feza (2018) invited 14 reception grade educators to observe and comment on video recordings of lessons from their own classrooms; again, the researchers noted strong leanings towards educator-centred views across this group's observations.

When it came to describing learning and educator roles in play, the South African practitioners in the present study articulated only one educator role: a play manager supervising children during free choice time. Like the font-of-knowledge, much of this role was about keeping order and managing activities, though they also sought to accommodate children's choice of play areas. In this instance, the role was to create space and time for child-chosen play (i.e., announcing choice time), circulating among children and stepping in during conflicts over toys or turn-taking. This finding was intriguing because it meant that the facilitating role did not extend to play: when practitioners described themselves as facilitators, they focused more on motivating children's participation in lessons, than on promoting their understanding. In line with this finding, only the two first learning themes applied to play contexts; practitioners emphasised children's learning in play as overtly demonstrating curriculum content, language and physical abilities. When they mentioned learning as understanding and applying in relation to play situations, the South African practitioners highlighted practical application over children's self-directed explorations and mastery.

3.3 Concluding on educational beliefs findings

The study's findings on perceptions of play, learning and educator roles in play offer important insights. Unlike for international research, where early educators typically view play and learning either as contrasting or integrated practices (Pyle & Danniels, 2017; McMullen et al., 2006; Cheng, 2001), strong contrasts were not found for the South African participants. On the perceptions questionnaire, some were hesitant in their ratings, and others more adamant, but all recognised play as joyful, chosen and vigorously active in their video-elicited statements about play in practice. Also, all participants expressed that learning could happen in play but fundamentally, their notion of learning in play was adult-defined. Held up against more nuanced notions observed for teaching and learning (i.e., a hierarchical theme pair complemented by a mutual theme pair, including a facilitation role), their notion of learning in play had two facets: reproduction and performance. Comparing with the construct of guided play, where educators actively facilitate children's attempts in a challenging and enriching play experience, this study contributes a novel take on play as practice: Practitioners in the study saw play as a form of a stage where children could demonstrate their proficiency. In turn, this shaped their enactment of guided play, where modelling dominated over instances of expanding children's understanding. As such, the study adds weight to arguments in the literature that having a reflective stance, and holding nuanced notions of play as ranging from child-led and chosen to play with greater degrees of adult-scaffolding, is necessary for educators to discern children's progressive gains on skills and understanding (Walsh & Fallon, 2019; Zosh et al., 2018; Pyle, DeLuca, & Danniels, 2017), and to take active roles in play. This point ties into the next section on practitioners' sense of efficacy and reflective orientations.

4. Efficacy and reflection: gauging the challenge

Overall, practitioners gave high efficacy scores early and later in the study, suggesting they felt confident to highly confident teaching the curriculum through play. Even so, efficacy scores for the reflective task dropped over time in four cases: Lisa, Liyanda, Thembi and Martha. Only Fikile and Lihle had a high sense of efficacy throughout. In professional development research, studies have found initial 'dips' in participants' sense of efficacy when first exposed to a new instructional strategy (Tschannen-Moran & McMaster, 2009; Wheatley, 2002). Also, that practicing educators' beliefs about their own capabilities are prone to shift in the natural course

of their daily work (Kleinsasser, 2014) – even on a weekly basis for student teachers during their practicum (Klassen & Durksen, 2014). Wheatley (2002) as well as Gregoire (2003) argue that drops in efficacy scores can suggest doubts, which are both natural and necessary for learning and change to happen in teaching: if educators do not experience concerns about their practice, they are unlikely to feel any need for expending effort on changing their practice with children.

A key finding from the reflective task, which could be problematic, was the interpretation of 'teaching the curriculum through play' revealed in practitioners' stated reasons. Bandura (1997; 2006) and others underscore that teaching efficacy is a multi-facetted, and often domain-specific, construct (Zee & Koomen, 2016; Kleinsasser, 2014; Klassen, 2004). This being so, it is critical to gauge what exactly practitioners judge themselves capable of doing and achieving in their contexts. As it turned out, the South African practitioners' moderate to very high levels of teaching efficacy for play-based practices referred to engaging children in play activities that were directly connected to the daily theme, and to occupying children with play materials and tasks while practitioners completed administrative work. This conception, where play activities serve as a classroom management tool, aligned with the thematic analysis of interview data, and, as discussed in previous sections, stood in contrast to the literature on guided play.

4.1 Practitioner reflection: findings on orientations

In the CAMCC, deeper reflection is thought to raise the likelihood of change happening, as practitioners spend more effort considering key aspects of a novel approach in relation to their own skills and context (Gregoire, 2003). In line with previous research applying the same orientation coding approach as in this study, findings showed a pattern with performance-oriented statements dominating in the data, followed by meaning and struggling statements (Mansvelder-Longayroux, Verloop & Beijaard, 2007). This tallies with recent research comparing South African teacher educators and students on their conceptions of reflection: teacher students did recognise reflection as relevant for their future profession, but with a focus on describing lessons, what did and did not work, rather than engaging critically with their practice, intentions, roles or linking to theories of teaching and learning (Robinson & Rousseau, 2018).

In the present study, six of the eight practitioners had instances of considering their practice in-depth: Maude, Lisa and Lihle, Thembi, Anele and Liyanda. Martha and Fikile were two exceptions in this regard. Martha's interview statements were solely performance-oriented, while Fikile had performance-oriented and some struggling statements. As such, it seems that some of the practitioners did engage in deeper forms of reflecting on their practice. Similar to the case of teaching efficacy, shifts in orientations were observed for both individual interviews and reflective data responses: more instances of struggling instances occurred, just as statements coded as meaning-oriented diminished for the group overall. Studies find that reflective orientations fluctuate over time, rather than remain unchanged or follow a set developmental pattern (Donche, Endedijk, & van Daal, 2015). More to the point, perhaps, this study underscored the need for establishing not only *if* practitioners reflect deeply, but *what aspects* of practice they reflect upon.

4.2 The content of participants' reflections: practices but not role

In the year-long study, which inspired the reflective coding approach used in this study, Bakkenes and colleagues (2010) tracked one hundred practicing teachers as they engaged with an educational innovation. Coding teachers' reflective journals, the research team identified six categories of learning activities: *considering own practice*, *experiencing friction*, *experimenting*, *getting ideas from others*, *struggling not to revert to old ways* and a*voiding learning*. Interestingly, the latter four categories were not evident in the South African data; only *considering own practice* and *experiencing friction* emerged from the analysis of reflective orientations; and in those instances of experiencing frictions, the most common causes were concerns about children's lack of learning or difficult circumstances (i.e., a struggling orientation). At least in part, this finding can be explained by differences in the nature of the data: Bakkenes and colleagues (2010) coded reflective journals describing classroom events with explicit requests for participants to focus on the innovation. This was not the case for the stimulated recall interview format, which led respondents to consider their practice in more immediate terms. Even so, the analysis found little to indicate that practitioners in the study thought of themselves as applying an educational innovation, despite the reflective task explicitly prompting them to consider their confidence for teaching the curriculum through play. Taken together with findings across data sources, this point becomes noteworthy.

In the focus group interviews, practitioners referred to trainings in terms of opportunities to gain novel play materials and discrete practical ideas, and not as occasions to engage with a new pedagogical approach. Then, the analysis of reasons given for their sense of efficacy on teaching the curriculum through play showed how practitioners understood this challenging task: rather than reflecting on their own teaching role, and in particular, their manner of engaging with children during play, participants conceptualised the task as keeping children busy with play activities that related to the daily theme, while they attended to administrative work. That practitioners were less familiar with reflecting on teaching roles and educator positions in play was substantiated by the individual interviews: when asked to compare their role in adult-led and play activities, they were unclear about the question and how to respond. In conclusion, several practitioners reflected more deeply about underlying reasons for own and children's actions in class, but the content of these reflections did not extend to nuanced understandings of their different teaching roles. In line with recent South African research, reflection appeared a tacit aspect of the profession and focused on improving immediate practice (Robinson & Rousseau, 2018). In the next section, the discussion shifts towards findings for the second research question on classroom practices.

5. Patterns of teaching and play facilitation

From the analysis of educator roles in play, three themes emerged in the study: managing play, initiating and extending play. With their implied span of adult involvement from supervising and encouraging play to joining and enriching children's play, these themes match findings from other cultural contexts, including Canada (Pyle & Danniels, 2017), Scandinavia (Løndal & Greve, 2015), Northern Ireland (Walsh, McGuinness, & Sproule, 2017) and the United States (Vu, Han & Buell, 2015). In the final study cited, researchers quantified early educators' roles in play before and after training in play-based practices (Vu et al., 2015). Similar to the present study, Vu and colleagues found practitioners' role as managers of play activities to dominate (occurring nearly 50% of the time) over co-playing and guiding in play (observed 21.3% of time in Vu et al., 2015). The results of both studies may reflect that guided play practices entail more responsive and demanding interactions with one child or a smaller group of children, than being a play manager. And so it may be that early educators need more support to consistently adopt guided play.

In the South African video data, one of the strongest examples of guided play was a puzzle activity, where Maude extended children's efforts by modelling strategies and encouraging their use of real-life experiences to reason about fitting pieces together. The circumstance of this being a strong example points to local cultural norms influencing adult and child roles during play. Greater playfulness and facilitation on the part of the educator (i.e., asking open-ended questions to challenge and guide children's reasoning, supporting their participation, collaboration and self-directed efforts) would have resonated more with current (Western) notions of guided play (Bergen, 2009; Weisberg,, Hirsh-Pasek, & Golinkoff, 2013; Toub, Rajan, Golinkoff & Hirsh-Pasek, 2016; Zosh et al., 2018). In the South African context, practitioners were more occupied with ensuring that all children were active than deepening their understanding (Feza, 2018; Aronstam & Braund, 2015; Shaik & Ebrahim, 2015). Finally, practitioners in this study sometimes struggled to find a balance between participating in play and taking over activities. For instance, Martha initiated a play activity by asking each child which area they preferred; when a boy moved towards brooms and buckets in the corner, she re-directed him to the block centre and told him to 'build like a man.' This professional dilemma is a common finding for studies researching play-based practices in early education settings (Cheng, 2010; Pyle & Danniels, 2017; Walsh, McGuinness, & Sproule, 2017).

5.1 Capturing practitioners' teaching styles

Comparing scores on the ECCOM social climate scale from this study with those of classrooms in Finland, Estonia and the United States (Lerkkanen et al., 2012), the strongest likeness was with the US findings in that practitioners were more directive overall. One exception was for items on *Student engagement*, where higher scores occurred on the facilitative style in the US. A notable difference from the other countries was the withdrawn style: in the South African results, all item means were above 2, while no Finnish scores reached this level, and only two Estonian item means were above 2 (Lerkkanen et al., 2012). These findings of low to moderate scores and a tendency towards a withdrawn style of teaching resonate with previous Grade R research. Here, practices are occasionally chaotic due to overcrowded classrooms and lack of more structured teaching approaches (Feza, 2018; Biersteker, Dawes, Hendricks, Tredoux, 2016). Again, these factors point to a need for research and programmes to address dilemmas of implementing play-based practices, rather than leaving professionals to resolve these on their own.

From this discussion of findings, three central points are worth raising on patterns in practice changes over time: First, several practitioners in the study had instances of guiding play and using a facilitative style with children, also from the outset of the study, albeit at moderate levels. Second, their practices and educational beliefs did not always align or shift in parallel. Finally, practitioners' teaching styles and instances of guided play did not change steadily in one direction but fluctuated over time. Linking to reviews of studies on educational beliefs and change, such cases of complex change journeys appear the rule and not the exception. These points are discussed next in the section on the change model.

6. Using the CAMCC to map educator change

Returning briefly to the study's incentive, the CAMCC was chosen for its potential as a diagnostic tool: the model's mapping of participants' educational beliefs and use of change mechanisms could help programme developers and trainers in making informed decisions about training designs and support underway by discovering practitioners' starting points, as well as patterns in their change journeys. Findings from this exploratory study have highlighted that precision in methods and constructs and mapping of practitioners' cultural context are pivotal steps for the model to serve as intended: practitioner change journeys follow patterns that defy simplistic links between their educational beliefs, change indicators and practices (Korthagen, 2017; Opfer & Pedder, 2011). In their seminal review, Opfer and Pedder (2011) urge researchers in this field to embrace the fact that teacher learning is: "…*a complex system representing recursive interactions between systems and elements that coalesce in ways that are unpredictable but also highly patterned."* (Opfer & Pedder, 2011, p. 379). Below, these points are discussed in greater detail.

6.1 Change scenarios and contrasting cases

As noted under key findings in this chapter, four practitioners fitted the CAMCC change scenarios best: Fikile (*Unconcerned*), Thembi (*Avoidant*) and Lihle (*Adopting*). In the fourth case, Liyanda appeared to switch between change scenarios: she first fitted the *Adopting* scenario but then switched to an *Avoidant* scenario. The CAMCC does account for scenario switching through its change mechanisms, just as Liyanda's journey could represent an 'implementation dip'. For three practitioners, their journeys did not fit either scenario neatly. Maude resembled the *Avoidant* scenario, and yet her style of teaching was moderately facilitating at

start and end the study; in between, she shifted to a directive style, while her educational beliefs were unchanged. Anele's change journey was another curious case. Over time, she shifted from child-centred to more directive teaching beliefs and practices. Anele had few meaning-orientated statements and expressed struggling later in the study, suggesting that over time, she may have grown concerned about her practice, and so reverted to a more traditional stance. In the final case, Martha's teaching style changed from mostly directive to some facilitating but her focus on correctness was unchanged, nor did she show instances of reflecting deeply about her teaching practice. In light of these three contrasting cases, I revisit the CAMCC change process below, starting with the programme message.

6.1.1 Responding to the training message: am I implicated?

The message advocated by the professional development programme was that 'children learn through play' – on the surface, all participants in the study already agreed, according to questionnaire and focus group findings. However, this broad message turned out to obscure important differences. When comparing questionnaire results with the thematic analyses of play and learning perceptions and practices, the *All play* and *Selective* groups did not correspond to specific perceptions of either learning or learning in play – e.g., one group favouring learning as correctness or as understanding more so than the other – nor was membership of either group consistently related to a certain style of teaching, or instances of guided play. This interpretation aligned with the focus group analysis, where practitioners described their daily teaching routine of alternating between adult-led activities, called *rings*, and periods of freely chosen play activities. Likewise, participants in the two focus groups and individual interviews felt that all kinds of activities qualified as play, and that children could learn in these different kinds of play contexts.

The second source, thematic analysis of interviews, revealed that the practitioners' notions of play as a learning context differed on a number of points from the construct of guided play, which was described in the literature review of this thesis (chapter two): according to the South African practitioners, signs of learning in play were instances where children overtly related play activities to the daily theme – for instance, playing with and talking about forms of transport – and imitating adult roles in the home and familiar jobs. In other words, a sense of correct and appropriate ways of playing prevailed for this cultural context; likewise, children's choice in play

was more about their activity preference (choosing which activity to do) than ongoing decision-making and choices in what to do and how. By highlighting the importance of managing children's play activities, practitioners' own roles also differed from the active, facilitative role in guided play – though some overlaps did occur. Hence, practitioners in the study were acting in line with their own notions of being a professional practitioner, including during play activities: caring for children, teaching and managing play, and sustaining their early childhood education sites as captured in the focus group data (see key findings in this chapter). As noted, his notion of play as practice differed from the construct of guided play presented in the extant literature (see sections 1.2, 1.3 and 1.5 in chapter two).

Explaining her model, Gregoire (2003) underlines a fundamental part of educators' learning journeys, namely, that beliefs change is only possible if professionals perceive issues in their practice, which require their attention and action-taking. Practitioners in the study appeared to have little cause to look for issues in their practices or reconsider their approach to implementing play-based ways of teaching. This was borne out by other data sources. Several practitioners in the group reflected deeply on their teaching intentions and actions in the classroom, but not necessarily on how they supported children's learning in play. For example, many felt unsure when asked to compare their teaching roles in adult-led and play activities. Reflective tasks responses were even more illuminating: Practitioners rated themselves as efficacious about teaching the curriculum through play, even when busy, although they considered this a question of occupying children with play activities. In light of these findings, adapting the CAMCC for mapping educators change on implementing guided play requires precision in how children's learning through play and educator roles are defined, presented and assessed. A second conclusion sprang from the puzzling finding that the classroom practices and educational beliefs of several practitioners in the study did not appear to align. The next section draws on insights from the literature to elaborate on this point.

6.2 Research on beliefs-practice relationships

In the literature, relations between educational beliefs and practices have puzzled researchers for decades (Buehl & Beck, 2015). Studies find that this issue applies to early education, for example in research comparing practitioners' self-reported beliefs and interactions in the classroom (e.g., Wen, Elicker & McMullen, 2011; Wilcox-

Herzog, 2002). Noticing that practitioners can hold beliefs that represent an ideal (i.e., being in favour of collaborative learning) that is removed from their classroom practice (e.g., Bryan, 2003), or their responses might represent socially desirable norms (Fleer, 2003), measurement specificity has been proposed as part of the explanation: namely, that educator responses to general questions about teaching (typically on questionnaires) are unlikely to align with their concrete behaviours. Looking back on decades of research applying his Theory of Planned Behaviour (TPB), Ajzen highlights this point "… *the beliefs that are accessible in the real situation in which a behaviour is performed can differ from the beliefs that are accessible in the hypothetical situation in which the TPB constructs are typically assessed."* (2014, p. 2). His recommendation to measure educational beliefs and practices at similar levels of specificity informed methods chosen in this study: The questionnaire, which tapped teaching efficacy and perceptions of play and learning, used concrete activities and instructional situations as items, as did the reflective task, and the video-stimulated recall technique, which elicited participants' thoughts and feelings while teaching. Considering these precautions, instances of disconnects between some practitioners' beliefs and practice remain a notable study finding.

6.2.1 Puzzling contrasts between beliefs and practice

The video-stimulated recall interviews attempted to elicit those practice-near beliefs, which informed practitioners' moment-to-moment decision-making in the classroom, and yet, these beliefs contrasted with practice in the cases of Maude, Thembi and to some extent, Lihle. For the two first practitioners, this contrast was strong: Maude had beliefs firmly rooted in traditional notions of teaching, while she used a mainly facilitative style in adult-led and play activities, except for the end of the first term, when her style was more directive. Thembi also saw herself as a font-of-knowledge, children as immature, and perceived correctness as a sign of learning, though unlike Maude, Thembi was facilitative during play, and directive in adult-led activities. Lihle was a puzzling case given a mix of beliefs about learning as understanding and as correctness, herself as a facilitator, and children as reasoned but also immature – her teaching style of facilitating in both activities was stable over time, even if her progressively more active role in play was one of managing, rather than guiding children's efforts in play activities. Finally, Martha was mainly directive in adult-led activities, matching her traditional beliefs about teaching and learning. In play, her style was first moderately facilitative and later withdrawn – she did engage with

children in play, although she shifted towards guiding and not just managing during play activities. These four practitioners had contrasting beliefs and practices. And, surprisingly, this gap was between traditional notions of learning and teaching (or a mix, as in Lihle's case) and moderate facilitative practices. Other studies have met cases of beliefs and practice disconnects, even when measuring beliefs and practices at similar specificity levels (Wilkinson et al., 2017; Schachter et al., 2016; Spruce & Bol, 2014). In their review, Buehl and Beck (2015) take a step back from discussions of whether beliefs influence practice, vice-versa or not at all, and argue for a reciprocal and complex relationship instead. In light of findings from the present study, I concur with this position, and add two suggestions to the existing teacher beliefs research: first, context can greatly shape practices enacted in classroom, even to the point of contrasting with practitioners' own epistemic beliefs, and second, this is especially the case if practitioners have few opportunities to reflect on and realise any beliefs-practice gaps.

6.2.2 Social context and awareness of beliefs

Practitioners in the study were surrounded by peers and TREE mentors advocating learning through play; they experienced concrete play-based practices and received new materials during trainings and cluster meetings. Based on the focus group and individual interviews, these materials and practical ideas were valued, and more importantly; the practitioners saw themselves as espousing positive beliefs about children's learning through play. Seen in this light, enacting elements of guided play and facilitating styles of teaching in their practice was entirely congruent with their social context and professed beliefs. What the interview method may have captured are practitioners' more deeply held, implicit beliefs about teaching and learning. Further, these appear to not have been surfaced or challenged in the support programme. This explanation speaks to the complexity of beliefs systems (Nespor, 1987) and people's capacity for holding conflicting beliefs (Pajares, 1992; Fives & Gill, Eds., 2015). Researchers investigating epistemic cognitions in teaching find that practices are informed by many concerns, sometimes related to educators' notions of learning, knowing and own teaching role and sometimes not (Brownlee, Fergusson, & Ryan, 2017; Alexander, 2017). The tendency with practices fluctuating, rather than changing steadily or not changing at all, also suggests that participants were indeed influenced by factors in their context and social circumstances, such as participating in a programme advocating play. For some, insights and principles on teaching

practices and children's learning featured in benefits they listed for trainings, though not frequently and not for the group as a whole (see focus group findings, chapter six, section 2). This raises questions on the sustainability of practices obtained from participating in the support programme. Reviewing the educational change literature, Gregoire concludes that *"… changing practices alone does not seem to ensure beliefs change."* (2003, p. 150). In other words, educators may adopt parts of a pedagogical innovation, but without surfacing and challenging their prior conceptions of teaching through deeper processing and reflection, changes are likely short-lived.

6.2.3 Reflection as integral to training and change

Findings across several data sources in this study suggest that participants were capable of reflecting deeply, but were less familiar with reflecting on their teaching role, specifically. In the focus group interviews, they referred to training gains as concrete activities, new materials, ideas for using existing toys and recycled materials in novel ways and spoke less of reaching new professional understandings or perspectives on their roles as educators, or learning skills to create own activities. Responses to the reflective tasks indicated a heuristic for play-based practices, meaning that practitioners had a default and less reflective take on teaching the curriculum through play: Across the group, emphasis was on keeping children active and busy with play activities that were overtly related to the daily theme, while practitioners completed other tasks. These responses were more in line with their professional notion of caring for children and safeguarding them, than with teaching and promoting children's learning. Reflecting deeply on practice and teaching roles requires incentive and effort – and first, practitioners need to question their default or habitual approaches (Gregoire, 2003, p. 156). Such dissonance was rarely observed among participants in this study. As noted in the literature review (chapter two, section 5.3), a meta-analysis of reviews on professional development research found that programmes were more effective when they included coaching and scaffolding of reflection, meaning that participants had frequent opportunities to actively engage with implications for their practice (Cordingley et al., 2015). Put briefly, support for reflection and ensuring that a given practice is meaningful for training participants are needed to raise the likelihood of sustained change in practice. In section 7 below, I conclude this thesis by revisiting considerations of researching across cultures, as well as of programmes promoting play-based practices, before making recommendations for future efforts.

7. Implications for future research and practice

A concern, which kept returning in the study, was the risk of imposing Western notions of play-based practices on the South African context. For instance, the eight focal practitioners held different conceptualisations of 'play' and 'learning' than those described in the guided play literature; pretence play in this context was more about children imitating realistic scenes from everyday life than fantasy make-believe; and play was seen more as a stage for children to demonstrate proficiency, than a context for growing in understanding and skills. This dilemma raised questions of whether some practices might be more 'ideal' or appropriate. Grappling with these risks throughout the study, I came to realise several more layers. In addition to issues of power-relations between participants and myself as researcher (see chapter three, section 1.6), applying the construct of guided play uncritically in this context would overlook rich and culturally relevant forms of play.

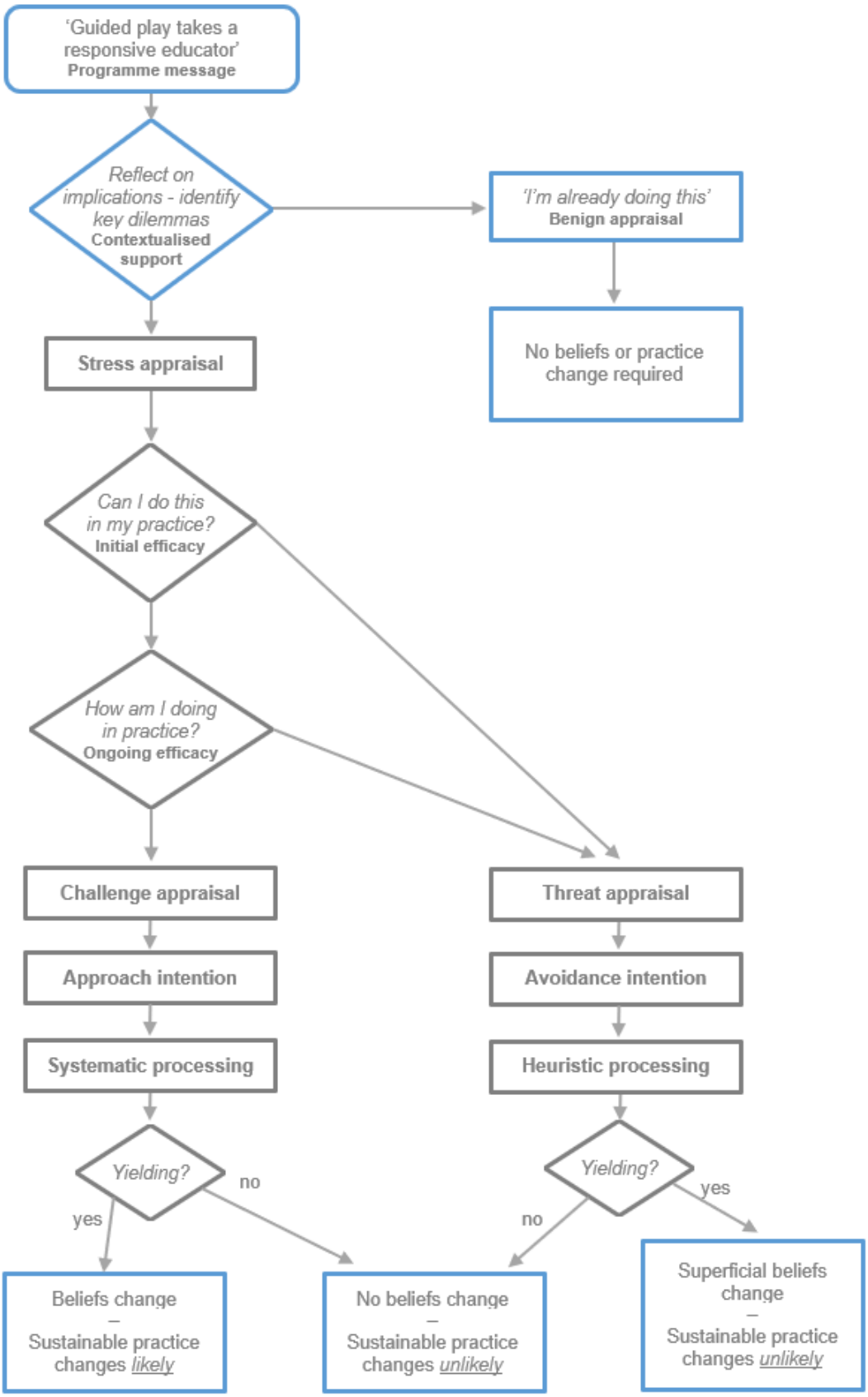
For example, although make-believe play, in the sense of children pretending to be superheroes or explorers of fantastic worlds, was less common in this study, other kinds of creative play occur in the South African cultural context. In her study of urban children's musical games on a Soweto playground, Harrop-Allin (2017) observed great resourcefulness and creativity in how children played with rhythms of words, sounds and movement and improvising in peer groups; drawing such vibrant and well-known forms of play into a more localised training could offer practitioners new perspectives on their learners, and children an arena for creative forms of play. As a second example, the focus group analysis found that caring for children was a central aspect of the South African practitioners' profession. Concerns of care for children's development and well-being, and perhaps especially their joy of being with children, is not far removed from responsive and autonomy-supportive teaching (Reeve, Cheong, & Jang, 2019; Hamre, 2014). Hence, building on these practitioners' beliefs about caring for children could be a bridge to more active and responsive roles in play that would be meaningful for practitioners in this study. This point relates to another layer: to overlook resources and strengths in this context by unintentionally reinforcing hierarchies of knowledge that are already present in South African early education. According to researchers in this setting, curricular guidelines are imbued with Western conceptions of childhood and at the expense of more culturally relevant norms and practices (Rudolph, 2017; Serpell & Marfo, 2011). In her ethnographic analysis of South Africa's National Curriculum Framework or NCF, Rudolph (2017)

gives this example: "*The NCF constructs the 'world of the child' in material terms in the section on 'Knowledge and understanding the world'* (p. 92) – a section that is borrowed from a UK publication on Guidance for the Early Years Foundation Stage (DfES, 2007). This is problematic, Rudolph argues, since indigenous notions of children's world and identity rooted in relatedness and belonging are overridden by global values of preparing for a competitive work life (Rudolph, 2017, p. 92). Rudolph's points resonate with tensions of developing programmes for scale, while ensuring their relevance in a given context: it is the risk of equating 'scalable' with 'formulaic' and easily replicable training designs (Brink, 2016; Nores, Figueras-Daniel, Lopez, & Bernal, 2018; Jensen et al., 2019b). But doing so could miss the ultimate purpose of achieving sustainable change with children as beneficiaries.

7.1 An adaptive, contextualising model of change

Reviewing findings across the study, I would argue that by omitting practice changes and the influencing role of participants' context, the CAMCC has two key limitations in terms of meeting the LEGO Foundation's programmatic needs. In Gregoire's research review, where she presents the CAMCC (2003), practice changes are discussed with sense of teaching efficacy featuring as a proxy, but sustainable changes in classroom practice are not part of the model's design. On cultural context, Gregoire (2003) does recognise the influence of educators' working conditions on their change journeys – again, with efficacy serving as a proxy for how supported and confident they judge themselves be, but no explicit mention is made about context in the model itself. In Figure 40, proposed revisions to the CAMCC are marked as blue boxes, and starts with a more specific programme message. (i.e., '*Guided play takes a responsive educator')*, followed by a revised step: Contextualised support. In this step, participants are introduced to guided play and responsive approaches, and involved directly in reflecting on implications for their practice to identify key dilemmas that will require targeted support and solutions. In Figure 40, the benign appraisal step (top right) has been updated to reflect cases where the contextualised support step reveals some practitioners to be already using guided play approaches in their practice and intentionally so. Hence, no changes in either their beliefs or practices would be necessary. This possibility was implicit in Gregoire's own version of the model and overlapped with cases where practitioners indiscriminately believed themselves to be applying the novel approach, in response to the message (2003).

Figure 40: Contextualising model of educational change



By adding the contextualised support step, the revised model acknowledges the need for ensuring that practitioners experience support to reflect deeply in iterative cycles, and the need for involving them in adjusting the pedagogical innovation – for example, by exploring what 'responsive' means for their cultural context, or which play activities lend themselves well for children's engaged learning in ways that are feasible given practice constraints. The steps of initial and ongoing efficacy also refer to concrete implications identified by participants. Some may then judge themselves unable to realise guided play in their setting (avoidance intention), or feel capable given sufficient guidance, support and resources (approach intention). In this way, the updated model attempts to move away from a linear logic, and embrace the cyclical and embedded nature of professional learning and change (Opfer & Pedder, 2011; Clarke & Hollingsworth, 2002). Another intention behind adding the contextualised support step is to refocus training designs on 'persistent problems' (Kennedy, 2016) and dilemmas of practice rather than leaving participants to grapple with these on their own. The final revisions to the model depicted in Figure 40 are changes in practice (blue boxes at the bottom): if no beliefs change occurs, then sustainable practice changes are unlikely; the same goes for superficial changes in beliefs; the updated model theorises that sustained changes, in this case, realising a responsive educator role in guided play, entails beliefs change. Beliefs and practices have been placed in one shared box to indicate their inter-relation without implying a set directionality (Clarke & Hollingsworth, 2002).

7.2 Precision in methods: prompting reflections

In line with previous research on professional learning and change (Kennedy, 2016; Cordingley et al., 2015; Opfer & Pedder, 2011), and for play-based practices in early education, specifically (e.g., Pyle, Poliszczuk, & Danniels, 2018), this study points to the importance of addressing dilemmas of implementing innovations in practice, rather than leaving research or programme participants to resolve these on their own. Beyond helping to pre-empt barriers and hindering factors, the inclusion of steps in a training design that aim to contextualise a novel pedagogical approach may also reveal meaningful entry points for change. As this study served to illustrate, educators may hold several beliefs about playful practices and their educator roles, which vary on reflectiveness: Practitioners can hold either-or beliefs, where learning is more or less assumed to happen in play (in favour), or deemed an unlikely outcome of play (not in favour). Studies find that some hold more reflective stances

on learning in play, recognising a spectrum of practices and the importance of adopting a responsive educator role (Walsh & Fallon, 2019; Pyle, DeLuca, & Danniels, 2017). This resembles the progression found for personal epistemologies with more naïve to complex beliefs (Hofer & Bendixen, 2012). Hence, a promising route for further research would be to devise methods and programme designs that explore whether support for reflecting on learning through play in practice may lead to more reflected beliefs, with attendant changes to enactment in practice. This would require approaches (and, ideally, scalable ones) that elicit practitioners' own interpretations, and whether they hold more or less nuanced notions of play as a learning context (Walsh & Fallon, 2019). The reflective task was very informative on this point: it showed practitioners' interpretations of play to be more about classroom management than promoting children's understanding and skills (see section 4 in this chapter). Future studies and programmes might benefit from deciding if their main focus is a) practitioners providing opportunities for children's engaged, self-directed play, b) adopting a responsive role in play, c) using educational games, or a combination of these practices (see also Zosh et al., 2018). Further, using concrete activities as prompts with an added focus on dilemmas (Kennedy, 2016), similar to the reflective task, seems a relevant avenue for gauging practitioners' own stances on children's learning in play.

7.3 Implications for my practice

This study is already informing the LEGO Foundation's programme efforts and research. Through this doctoral thesis, the synthesis of research on engaging young children through playful activities (Jensen et al., 2019b) and observations made by colleagues and partners during field trips, the issue of practitioners struggling to adopt an active and responsive role in play has come to the fore in our work. Conceptually, play facilitation is now articulated as a span of practices and educator roles. Together with practice and research partners, we are developing guidelines with concrete examples from across cultures on how educators can take inspiration from children's play to design learning activities that build on what they know and care about; how educators can tune into children's states of being in play and join as co-players; how they can be intentional about facilitating children's understanding in play, and meet specific learning goals, without disrupting the playful experience. Another line of work is about measuring the quality of children's learning through play experiences – both validating instruments used to evaluate the impact of

programmes, advancing the field on measuring practice quality to focus on children's experiences as well, and as a starting point for reflective tools that professionals (and perhaps children) can use develop a shared understanding of success in practice. As a community of actors promoting young children's learning through play, we still have much more ground to cover. Far from solving the riddle of educator change journeys, this study has highlighted layers and complexities, which warrant further investigation – and which we will have to consider with our practice partners when designing and implementing programmes. As a direct consequence, studies are underway, which will explore educational change in other cultures, with larger groups of practitioners, and with a contextualising approach to capturing change.

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Appendix one | ethical approval (SA)

Documentation for ethical approval from University of Kwa-Zulu Natal.

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

11 April 2016

Ms Hanne Jensen
School of Nursing & Public Health Medicine
Howard College Campus

Dear Ms Jensen

Protocol reference number: HSS/0246/016
Project Title: The Attitude and Behaviour Study in South Africa

Full Approval – Expedited Application

In response to your application received 16 March 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....

Dr Shenuka Singh (Chair)
Humanitities & Social Scinces Research Ethics Committee

/pm

Cc Supervisor: Dr Jane Kvalsingh
Cc Academic Leader Research: Professor M Mars
Cc School Administrator: Ms Caroline Dhanraj

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1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

Appendix two | ethical approval (UK)

Documentation for ethical approval from University of Kwa-Zulu Natal.

University of Cambridge Faculty of Education - EdD Registration Viva Report Form

Date of Registration Viva: 29th February 2016	
Student Name: Hanne Jensen	Supervisor(s): David Whitebread and Ros McLellan
Advisor (1st panel member): Jan Vermunt	Assessor (2nd Panel Member): Steve Watson
Research Title: Attitude and behaviour change study with South African practitioners	
Outcome of Viva (please write appropriate number): 2 1 = Pass. To be registered for EdD. 2 = Pass, subject to corrections and/or additions. Timescale for completion of corrections: _12 weeks___ 3 = Revise and resubmit. Date of resubmission (not more than one year part time study after viva): _____ 4 = Not be permitted to register for the EdD nor to revise and resubmit for EdD registration, but be offered the opportunity to submit for an alternative award 5 = Fail and be removed from the register of graduate students.	
For students who have passed (outcomes 1 and 2) please complete the sections below:	
The ethical checklist has been completed √ There are no ethical concerns √ Further clearance is required – refer to Standing Panel on Research Ethics ☐	
The timeline for completion of data collection/fieldwork has been discussed √	
The student has completed a Risk Assessment form for data collection/fieldwork √ **All** doctoral students must complete a Risk Assessment form, **regardless of the nature of their research.**	
The student has considered all fieldwork costs and has the means to pay for them √	
Specialist skills required to complete the research have been acquired or a plan for their acquisition is in place √	
The timeline for submission and completion of the thesis (formal ratification by BGS) has been discussed. The research should be completed within 15 terms part time. √	
The panel members have discussed and signed the student's EdD Logbook √	

Appendix three | consent form A

Consent form used with the large group of participants.

The Attitude & Behaviour Study in South Africa
Information Sheet and Consent to Participate in Research (135 practitioners)

Date:_____

Dear Practitioner,

You are being invited to consider participating in a study that involves research about the Sizanani TREE programme. The aim and purpose of this research is to find out what you think about play-based learning. The study is expected to enrol 135 ECD practitioners in eThekwini and Port Shepstone. It will involve the following procedures:

Answering a survey at the beginning and end of the programme, and give short written statements - two on what you think are important characteristics in a good practitioner, and two reflections on your practice. These activities are planned to take place when you come to TREE for your training and should take 2.5 hours in total. The duration of your participation, if you choose to enrol and remain in the study, is expected to be 9 months. The study is funded by the LEGO Foundation.

Although you may not benefit personally we hope that the study will create benefits for the training of future practitioners, as we will understand better what training is required. There is no risk in participating in this study and confidentially will be ensured as neither your name, nor the name of your practice will appear on the survey or tasks, only a number.

More information about the study can be obtained from the local researchers: Jane Kvalsvig at o31 2093735 (Cell 083787946) or Myra Taylor: 031 2661592 (home) and 031 2604499 (work). The research team is from UKZN's Discipline of Public Health, School of Nursing & Public Health (phone 031 2604499 / 4383) and Hanne Jensen from the LEGO Foundation.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSS/0246/016).

In the event of any problems or concerns/questions you may contact the researchers at the above phone numbers or email address or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

CONSENT

I have been informed about the study entitled Attitude & Behaviour Study in South Africa by my trainer _____ (name). I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researchers at any point.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

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Durban
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KwaZulu-Natal, SOUTH AFRICA
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Email: HSSREC@ukzn.ac.za

_____ _____

Signature of Participant Date

Appendix four | consent form B

Consent form used with the selected group of participants.

The Attitude & Behaviour Study in South Africa
Information Sheet and Consent to Participate in Research (9 practitioners)

Date:_____

Dear Practitioner,

You are being invited to consider participating in a study that involves research about the Sizanani TREE programme. The aim and purpose of this research is to find out what you think about play-based learning. The study is expected to enrol 135 ECD practitioners in eThekwini and Port Shepstone. It will involve the following procedures:

In addition to answering a survey and give four written statements about what you think are important characteristics in a good practitioner, and your practice (which happens as part of the programme and should take 2.5 hours in total) we are requesting permission to come to your ECD site two times during the year. When we come, we are requesting permission to video you when you are working with the children and then to ask you what you think about the videos. The duration of your participation if you choose to enrol and remain in the study is expected to be 9 months. The videos will be done and edited so that confidentiality is maintained. The study is funded by the LEGO Foundation.

Although you may not benefit personally we hope that the study will create benefits for the training of future practitioners, as we will understand better what training is required. There is no risk in participating in this study and confidentially will be ensured as neither your name, nor the name of your ECD site will appear on the videos or records from your interviews, only a number.

Additional information about the study can be obtained from Jane Kvalsvig at 031 2093735 (Cell 083787946) or Myra Taylor: 031 2661592 (home) and 031 2604499 (work).

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSS/0246/016).

In the event of any problems or concerns/questions you may contact the researchers at the above phone numbers or email address or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

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CONSENT

I have been informed about the study entitled Attitude & Behaviour Study in South Africa by my trainer _____ (name). I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researchers at any point.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

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I hereby give consent for the researchers to:

Audio-record my two interviews	YES / NO
Video-record my practice twice	YES / NO
Audio-record focus group discussion	YES / NO

_____ _____

Signature of Participant Date

Appendix five | excerpt of research record

Date	Topic	Description	Documentation
Call for collaboration & interviews with local researchers			
Dec 22 '15 - Jan 8 '16	Call for research collaboration	Call for South African local research team and advisors with expertise in survey research & qualitative methods	
Jan 11 - Feb 2	Interviews	Interviews with research team and advisor candidates from ELRU (1), UKZN (4), UNISA (3) and CPUT (1), and research assistants (5)	
Local advisors & research team confirmed			
Jan 29	Advisor confirmed	Linda Smith, CfE, confirmed as practice advisor	(no contract)
Feb 4	EdD portfolio submitted	Portfolio submitted along with ethics check-list and risk assessment for the study	
Feb 5	Research assistant confirmed	Snenhlanlhan P. Sibisi confirmed as RA	(contract)
Feb 11-12	Final advisors confirmed	Vanessa Scherman & Hasina Ebrahim (UNISA) confirmed as final advisors for the study	(contract)
Feb 19	Local researchers confirmed	Jane Kvalsvig & Myra Taylor (UKZN) confirmed as researchers for the local team in Durban	(contract)
1st Advisory meeting, ethics approval (University of Cambridge, UK) & survey piloting			
Feb 29	Ethics approval - Uni of Cambridge		Reg. viva report
March 11	1st Advisory meeting	Review of study design, instruments and piloting plans with advisors, research team and TREE staff (M&E, coordinator and programme manager)	(research proposal; summary of recommendations)
March 13	Ethics application - UKZN	Submitted by Myra Taylor at UKZN	
March 17	TREE trainer check-in	Lead researcher & RA meet with four TREE trainers to explain study purpose, timeline and research instruments and enlist their commitment	
-	Survey piloted	Survey section C in IsiZulu piloted (directions, 18 items on activities children might do and 1-6 scale)	Journal entry 14-03-16 and overview 16-04-16
March 23	UKZN acknowledges receipt	Prem Mohun, UKZN, acknowledges receipt of ethics application on behalf of Dr. Shenuka Singh	(e-mail)
March 30	1st survey back-translation	1 TREE staff back-translated - this revealed use of formal IsiZulu	photos showing backtranslation
March 31	2nd & 3rd survey back-translation	2 UKZN staff did 2nd back-translation; directions for section C and D turned out to ask respondents to rate suitability of activities; directions were revised and 2 other staff members did 3rd back-translation. This version was then approved, as it overcame the misdirections.	Photos of back-translations
		TREE Trainers equipped to give survey? Trainer fell ill - and three trainers handled all trainings	

Date	Topic	Description	Documentation
May 3-4	Equipping trainers for Task A	It proved challenging to find a time where all four trainers were in one place, in order to equip them to give Reflective Task A. Instead, Sne joined one workshop for each trainer and explained the task to them. May 3-4 for Trainer A, May 9-10 for B, May 12 for C and D [names anonymised for thesis]	Journal entry 11-05-16
May 5	New Sizana participants	It turns out that some of the participants joining Cluster Workshop I did not attend the initial two-day training; hence, they have not complete either consent forms or the baseline survey. The research team and TREE agree that for remaining workshop sessions, trainers give these participants consent forms and surveys before reflective task A .	Journal entry 05-05-16
May 11	Change in 9 participants	One practitioner is based in Eshowe (A24) - a mountanious area 150km North of Durban. Since we still have 2 practitioners on the original list, which have not declined to participants, Sne will call D20 first, and A46 next to recruit a replacement.	
Pilot visits 1 and 2 (VSR interview and classroom recordings)			
	Pilot visit 1	Main challenges identified: 1) practitioners feel compelled to give the 'right' answer, or the answer they think we want, 2) when interviewed, they tend to describe their practice in general terms rather than their concrete thoughts and feelings in the moment of the video, and 3) during video recordings of play activities, they sometimes leave the classroom for 5 minutes or more, which affects the later VSR interview.	
May 12	Research team check-in	The team discussed interview and recording challenges, as well as inter-rater strategies. Importantly, given differences in participant-researcher language and culture, the team agreed to add a proficioent native speaker to qualify interpretations of practitioners' written and spoken words.	Overview
May 13	Pilot visit 2	Practitioner compliance is still a challenge, though prompts underscoring that there are no right or wrong answers help the situation. Sne is coached to build rapport with the practitioners, getting them to relax before starting the video stimulated recall interview, and phrase questions like a conversation, instead of repeating questions in a rigid fashion.	Journal entry 13-05-16
Site visits, Cluster Workshop 2 (of 4) and Reflective Task B (teaching confidence)			
May 17	Capturing supportive/hindering factors at workshops	In effort to broaden the scope of our interview questions (mainly the focus group interview scheduled for study end), Sne joins as many Sizanani workshops as possible, where the nine selected practitioners are present. If supportive / hindering factors are not part the workshop, the trainer is asked to address this topic towards the end of the workshop, allowing Sne to capture main points.	Journal entry 13-05-16

Appendix six | questionnaire item overview

Efficacy questionnaire items

Items on efficacy for instruction

4. I can accurately see if learners understand what I teach

5. I can give more difficult task to children who can cope

8. I can design activities that meet the needs of different learners in my classroom

13. I can use different ways of assessing the learning of children in my practice

15. I am able to give different explanations when learners are confused

Items on efficacy for classroom management

1. I am able to calm a learner who is disruptive

6. I am able to prevent disruptive behaviour in the classroom before it occurs

7. I can control naughty children in the classroom

9. I am able to get learners to follow classroom rules

14. I am confident when dealing with learners who are physically aggressive

Items on efficacy for collaborating with others

2. I can make parents feel comfortable coming to my practice

3. I can assist families in helping their children do well in my class

10. I am confident I can get parents involved in school activities of their children

11. I can collaborate with other professionals e.g. social workers to help children with disabilities

12. I am able to work together with other practitioners and staff to teach children in my classroom

Adapted from the Teaching Efficacy for Inclusive practices (TEIP) developed by Sharma, U., Loreman, T., & Forlin, C. (2012). Measuring teacher efficacy to implement inclusive practices. Journal of Research in Special Educational Needs, 12(1), 12–21. https://doi.org/10.1111/j.1471-3802.2011.01200.x

Perceptions questionnaire

Free, unstructured play items	
Items from Fisher et al. (2008)*	***Corresponding items from adapted version***
3. Throwing or rolling a ball or using other kinds of age-appropriate sports equipment	Throwing or rolling a ball or using other kinds of sports equipment (8)
6. Pretending with baby dolls or stuffed animals	Pretending with baby dolls or teddy bears (15)
7. Dressing-up or pretending to be a superhero, a doctor, a mom, or anyone else	Dressing-up or pretending to be a superhero, a doctor, a mom, or anyone else (3)
8. Using everyday objects found around the house as toys (like pots/pans, rubber containers, etc.)	Using everyday things as toys (like containers, pots, elastic bands etc.) (10)
9. Using building blocks or building sets	Using building blocks or building sets (2)
11. Coloring, drawing, painting, or doing other arts and crafts, or playing with clay	Colouring, drawing, painting, or doing other arts and crafts (7)
12. Exploring and discovering things inside or outside your house	Exploring and discovering things inside or outside your classroom (1)
Discarded items	***Additional items in adapted version***
1. Using child-size play sets (like kitchen sets, workbenches, doctor's kits, tools)	Using empty cardboard boxes for games (4)
2. Going outside to run around or use playground/backyard equipment	Singing and dancing (12)
4. Using playsets (like Little People and Polly Pocket) or figures (like rescue heroes)	Making music and rhythms with handmade instruments (like boxes or containers with beans) (17)
5. Using toy vehicles	Retelling a story in their own way or coming up with a story (18)
10. Having play dates or getting together with other children/babies around the same age	
13. Participating in organized activities, like Gymboree, Mommy & Me classes, or playgroups	
14. Crawling, walking, & running around for no particular reason	

*exempting 7 electronic play items

Structured play items	
Items from Fisher et al. (2008)*	***Corresponding items from adapted version***
1. Having a book read to them	Having a book read to him/her (14)
2. Looking at books or reading on their own	Looking at books or reading on his/her own (16)
5. Coming along on a shopping trip	Going to town with a parent (13)
7. Using flashcards with words and pictures or with simple math concepts	Using flashcards with words and pictures or with simple math concepts (9)
Discarded survey items	***Additional survey items in adapted version***
3. Listening to music	Using scissors to cut shapes or a straight line (5)
4. Going on trips like to the library, museum, or zoo	Doing a puzzle (6)
6. Doing chores around the house alongside of you or another adult	Discussing family, my body or another theme during morning ring time (11)

*****exempting 7 electronic play items

Appendix seven | interview protocol A

Instructions for the interviewer

This protocol describes how to interview practitioners based on the two videos recorded in their classroom: one adult-led activity and one activity where the children play. At the end of each visit, you will sit down with the practitioner for around one hour. You will use the audio recorder to record the entire interview, and the tablet to show videos of practice. Keep the interview as a natural conversation; rephrase questions, ask her to explain by showing kind interest, play her words back to her (i.e. 'How do you support and encourage the children?' Can you show where you notice if children understand'). Note how the practitioner responds. If she is uncomfortable, you can stop the video and chat to her, assure her that she can speak her mind.

Instructions for the practitioner

Again, it is important that the practitioner feels comfortable during the interview. Find a quiet corner where you can sit down and introduce the task like this: *In a moment, you get to see the videos from your practice. First, I will ask you to recall what you thought and felt while teaching. Then I will show smaller clips and to ask more about your role and what you see happening during children's activities. The interview should take no more than one hour. I will record it to help me remember what we talked about. Thank you.*

Start the recording as soon as the practitioner agrees to start the interview. The interview has three main sections: A) video-stimulated recall, B) questions on the adult role and C) questions on child activities. Each section is described below.

A. Video-stimulated recall (40 minutes)

In this section, you show the first 10 minutes of each video (20 minutes of video in total) that you recorded at that day's visit. Please show them in this order: Adult-led activity and Children playing. It is important not to mention 'play' before the participant does so herself. Otherwise, we cannot tell if she was prompted to talk of play during the visit or does it at her own initiative.

Before starting each video, ask the practitioner to recall what s/he thinks and feels in the video (not what she thinks about the lesson or activity now, but what she felt or thought in each moment of the video). Remind her: *there is no right or wrong answer; we hope to learn what you were thinking in that moment, whatever those thoughts were.* As you watch, let the

practitioner pause the video, or make sure to pause it after 1 minute, and ask: *What do you think or feel in this moment?*

If the practitioner starts explaining or describing her practice in general terms or discourse (i.e. 'when I teach it is important to not spoon-feed them information…') you need to direct her back to being concrete: point to a gesture she does, a child's response or action, and ask: *What did you think or feel right here, when this happened? How about here?*

If the practitioner moves outside the frame in the video, ask: *Can you remember what you did there and where you went?*

B. Questions on the adult role (7 minutes)

In this section, you ask the practitioner to describe: What is your role in the first video? What is your role in the second video? What is the difference between your role in the first and second video, as you see it?

If the practitioner struggles to understand the question, despite rephrasing and a few prompts, ask instead: is your teaching role the same in the two videos, or is it different? If she understands and replies, move on. If she does not, also finish the section and move on.

C. Examples of child activities (10 minutes)

In this section, you show three clips of children playing inside or outside the classroom. Each clip should be around 1-2 minutes. Make sure to note the times of the clips you showed to the practitioner in your journal. As you watch each clip, point to a child and ask: *can you describe what happens here? How much is this activity play and why? How much is it learning and why? If the practitioner gives brief answers (e.g. ''the child is busy' or 'play'), ask her to elaborate.*

Short conclusion (3 minutes)

Finish the interview by asking: *Was the camera distracting to you? To your learners? Were you able to relive what you thought and felt when teaching?*

Thank to practitioner for her time and help with the research. Ask if she has any questions in return, and if she felt comfortable during the interview.

Appendix eight | interview protocol B

Instructions for the interviewer

This protocol describes how to interview practitioners based on the two videos recorded in their classroom: one adult-led activity and one activity where the children play. At the end of each visit, you will sit down with the practitioner for around one hour. You will use the audio recorder to record the entire interview, and the tablet to show the videos. Keep the interview as a natural conversation; rephrase questions, ask her to explain by showing kind interest, play her words back to her (i.e. 'How do you support and encourage the children?' Can you show where you notice that children understand?'). Note how the practitioner responds. If she is uncomfortable, you can stop the video and chat to her, assure her that she can speak her mind freely and that her opinion is valued.

Instructions for the practitioner

Find a quiet corner where you can sit down and introduce the task like this: *Thank you for agreeing to this interview. We are trying to learn more about what it is like to teach young learners. Your opinion can really help us. We are not inspectors or here to check on your work. There are no right or wrong answers. In a moment, we will start the interview. First, we talk a bit about what teaching today was like for you. Then we look at the two videos together. Lastly, I have a sorting game for you with pictures of activities children might do. The interview should take around one hour. May I record our conversation to help me remember what we talked about? Thank you.*

Start the recording as soon as the practitioner agrees to start the interview. The interview has three main sections: A) video-stimulated recall, B) questions on the adult role and C) the sorting game with children's activities. Each section is described below.

Video-stimulated recall (35 minutes)

In this section, you start by asking the practitioner: *What was it like to teach your learners today? (let her respond) What are you pleased with? What surprised you?* Next, introduce the adult-led video by saying: *Now we will look at the two videos from your practice. This is what it looks like. Start the video and let it run for ca. 1 minute.* Adopt a teasing tone and ask something like: *Are you surprised by what you looked like in the video? Did you think you looked like that? Give the practitioner a chance to express her bemusement. Then follow-up with: Sometimes it feels a bit strange to look at yourself on the video, and that's completely normal.*

Conducting the VSR interview

We would like to know what you thought and felt while teaching - in that very moment. Is that alright? You then show the first 10 minutes of each video (20 minutes of video in total), which you recorded at that day's visit. Please show them in this order: 1) Adult-led and 2) Play activity. It is important not to mention 'play' before the participant does so herself. Otherwise, we cannot tell if she was prompted to talk of play or did so at her own initiative.

As you watch the video, ask the practitioner to recall what s/he thinks and feels in the video (not what she thinks about the lesson or activity now, but what she felt or thought in each moment of the video). Remind her: there is no right or wrong answer. We hope to learn what you were thinking in that moment, whatever those thoughts were.

Let the practitioner pause the video, or make sure to pause it every one minute, and ask: *What do you think or feel in this moment? And what about here?* Make sure to rephrase and keep the conversation natural and flowing.

If the practitioner starts explaining or describing her practice in general terms or discourse (i.e. 'when I teach it is important to not spoon-feed them information…'), ask her once: *What makes you say that? This is to allow her to elaborate, and acknowledge her contribution.* Then you guide her back to being concrete: point to a gesture she does, a child's response or action, and ask: *What did you think or feel right here, when this happened? How about here?* If the practitioner moves outside the frame in the video, ask: Can you remember what you did there and where you went?

Finish the VSR interview

Finish this section by asking: What was it like to see yourself on the video? Was the camera distracting to you? To your learners? Were you able to relive what you thought and felt when teaching?

Questions on the adult role (3 minutes)

In this section, you ask the practitioner: *Would you say your teaching role is the same in the two videos, or is it different? Can you describe how?* If she understands and replies, make sure to have her elaborate. If she does not, just finish the section and move on.

Sorting game with child activities (25 minutes)

In this section, you use the four sets of cards to do a sorting game with the practitioner. The game is meant to be relaxed and engaging - have a conversation underway and help the

practitioner feel comfortable. You can rephrase instructions to the keep the flow going. If the practitioner struggles with a specific card, say: *It's ok, just give your best guess.*

Preparing the sorting game

For each interview, start with card set 1 to 4. Prepare the order of the sets in advance. Also, have envelopes ready for cards chosen as play/not play and learning/not learning so you can circle these cards on the response sheet after the interview. You always ask about PLAY with card sets 1 and 2, and always ask about LEARNING with card sets 3 and 4.

Introduce the sorting game by saying: *Are you up for a sorting game with cards? The game helps us to talk about children's play and learning. You are welcome to think aloud and share anything that comes to mind. It's your opinion that counts. I'm going to show you this card set first. Let's spread them out on the table so you can see all of them. These cards have children doing all sorts of activities.*

Conducting the sorting game and choosing cards

Now, please choose a card where you think the child is playing/learning (practitioner picks a card). *Great! Let's put it in this basket (point to blue basket). This will be the basket for cards where children are playing/learning.*

Are there any cards where the child is NOT playing/learning? (Practitioner picks a card). *Let's put it in this green basket (point to basket). This will be the basket for the cards where children are NOT playing/learning. Great!*

Please go ahead and sort the cards as you please; which do you think show children playing/learning and which cards show children NOT playing/learning?

Keep a light conversation with the practitioner, and help her relax; we are using the cards to prompt her thoughts about children's learning and play, so any thinking aloud is welcome, including questions, concerns, insecurities, jokes etc.

If the practitioner is struggling with a specific card, remind her: There is no right or wrong answer, just put the card where you think it fits best. Take all the cards chosen as play from the basket and spread the out: Could you show me which of all these cards best shows that the child is playing/learning? Why do you think so? Write this response on the sheet, and then put stack in correct envelope.

Take all the cards chosen as NOT play/learning and spread the out: *Could you show me which of all these cards best shows that the child is NOT playing/learning? Why do you think so?* Write this response on the sheet, and then put stack in correct envelope. Repeat this procedure for the next set (but keep the conversation natural and flowing). If the practitioner is sorting by the same criteria, you can start with: *These cards are a little different than the last set we looked at, but please do the same thing.*

Finish the sorting game

Once the practitioner has finished sorting, thank her, and ask: *What was the sorting game like for you? What was hard or easy? Did you find the pictures clear or confusing?*

Short conclusion (2 minutes)

As a way to round off the interview, ask the practitioner to share childhood experiences: So, now we can talk about the start of this new group of learners. *What has it been like for you to start with this new group of learners? What is easy and perhaps challenging? Do you feel able to use what you've learned in the Sizanani Network with these learners? If yes, can you give concrete examples from your practice? If no, why do you feel this is the case?*

Have you had any reactions from parents? How often do you talk with parents of individual learners - daily, weekly, monthly or less? What do you dream of for your practice? For yourself as a practitioner?

Thank to practitioner for her time and help with the research. Ask if she has any questions in return, and if she felt comfortable during the interview.

Appendix nine | focus group protocol

Instructions for the moderator(s)

This protocol describes how to moderate a focus group interview with groups of 4-5 practitioners. The purpose is to explore themes that have emerged from for example individual interviews, as well as the practitioners' circumstances. The questions are organised around personal, and in particular, contextual factors:

- *Personal factors:* understanding of self as practitioner challenges and approach to tackle these.
- *Contextual factors:* classroom environment (and learner behaviour), workloads and tasks beyond teaching, colleagues and working culture.

Your role as a moderator

As moderator you facilitate the discussion, prompting members in the group to speak, requesting overly talkative members to let others talk, and encouraging all the members to participate. If practitioners starting discussing together, this is really great. As long as they address the topic, you can step back and let the topic unfold. Otherwise guide them back. Your task is also to record the session, and take notes that inform potential further questions to ask. Finally, you are creating an environment that is good for group discussion (e.g., dealing with latecomers, being sure everyone has a seat, arranging for refreshments etc.).

Supplies & preparation

For this focus group interview, you will need a room at the TREE office, for example the training room, your recorder and phone (as a backup), research journal, and drawing tools:

10 sheets of paper
Coloured pens (3 packets, 6 colours at least)
10 pencils (sharpened)
3 erasers

Prepare the room with a table and chairs for you and the whole group to sit around (you will be sitting together in one group). Arrange drawing materials, tea, coffee etc. like you would at home when welcoming guests you know well (not a formal situation).

Welcoming practitioners

As the practitioners arrive at the venue, welcome them and offer refreshments. It is great if they meet the other practitioners and start chatting. Ask if they all know each other, and if not, make sure to introduce them. Also, keep a light conversation going: *how was your trip here, how has your week been so far, how are you?*

Once all the practitioners have arrived, ask them to join you at the table. Draw where they sit to help you recall the situation when transcribing the interview.
Start the focus group interview by saying:

Thank you for joining this interview today. We really appreciate that you made your way here. This research is about what it is like for practitioners like yourselves to teach young learners. Your opinion can really help us. The more you can describe for us what teaching is like for you, the more you help. And remember, there is no right or wrong answer. For this interview, we are talking together as a group. As a start, we have a drawing activity where you draw yourself as a practitioner, and share what your drawing shows. Then we have a discussion about your work as practitioners.

I will raise some topics, but we can all ask questions and raise topics in this interview. Once we feel the discussion has painted a clear picture of your work and teaching, we will finish and have lunch together. The discussion should take around two hours. May I record our conversation to help me remember what we talked about?

Once practitioners agree, start both recorders and ask them to state their names, one after the other, so you can recognise their voices later.

Starting the interview

This activity is about practitioners participating in the research in a relaxing and creative way by drawing themselves as practitioners, and sharing what their drawing shows. Please give the practitioners this prompt: *How do you see yourself as a practitioner? Please draw a picture of yourself teaching and then describe in words what you have drawn.* If they ask ‘should I write on the drawing?’ go ahead and say: *you are welcome to do so, yes.* It may be that some practitioners finish faster than others. In that case, you can prompt them to write what they have drawn onto their picture. Keep an easy conversation going; it is great if practitioners laugh together, smile and have a bit of fun while drawing. You can draw yourself in order to take part in the activity. Once all practitioners have finished drawing (ca. 20-25 minutes), ask who would like to share her drawing. One by one, ask the practitioners to explain their picture; ask questions and be encouraging, point to parts on the drawing and

invite others to ask questions. Note-taking: While the practitioners explain, you take notes to summarise their points later. We are interested in how they describe themselves as a practitioner - their role and how they interact with learners, and what each element in the drawing represents - this activity is also a way to warm up the practitioners, and ease into the next questions (see below).

How practitioners entered their profession

Ask the practitioners to share: *how did you become an ECD practitioner?* (follow-up question: what inspiration or event led you to this profession?) Here we are interested in the practitioners' story; how did they choose to start teaching? What person, event or other inspiration was part of this choice? How was their first years of teaching (was it a small group, young learners?). It is important that all practitioners in the group get a chance to share their story.

Ring time and choice time activities

Do you have ring time in your practice? If the practitioners agree, continue by asking: *What is ring time like your practice?* Let the practitioner describe, and ask follow-up questions (these should cover what she does during ring time, what the children do, what kind of activities she likes to use and what materials). Let each practitioner describe how ring time takes place in her own practice. If a practitioner says something like yes, me too or the same as her you still need her to elaborate. For example: nod and smile while asking: *Right, and what part is the same for you?*

Once all practitioners have had a chance to describe this activity, continue with: *how about choice time, do have this in your practice?* If the practitioners agree, continue by asking: *Can you describe what choice time is like?* Let the practitioner describe, and ask follow-up questions (what she does during choice time, what the children do, what kind of activities she likes to use and what materials). Once all practitioners have had a chance to describe this activity, the next question is: *when do learners play during your daily programme?* Ask practitioners to describe and elaborate their answer. You can ask the next practitioner by saying: *how about you?*

Member checking: take a brief moment to recap what the practitioners have shared about ring time, choice time and children's play in the daily programme - you don't have to memorise everything they say; simply play back their main points, ask if this covers what they wanted to share and if they have anything else to add.

Resources in their environment

Continue the interview in an easy flow by asking the next question: *what materials do you use for your learners' play?* Let the whole group offer suggestions, nod and try to ensure that all practitioners get a chance to make suggestions: *how about you? Anything else you use?* Ask clarifying questions too (e.g. what is 'recycled materials' to you? or can you give a few examples? We are hoping to get a rich description of the materials practitioners use in their practice, how they chose to have this material, where they sourced them from, what challenges they have with them etc. As such, you can follow topics raised by the practitioners.

Then continue with a material practitioners have mentioned and ask: *how do these materials help in your practice? Are all materials good at* [what the practitioner mentions]? *What would happen if you didn't have this (or these) materials? What would it be like for you learners? Can you think of a really good day in your classroom in last few months, what happened?* Let the practitioner describe in detail. Then continue by asking: *Whom do you share this with? What did you share? How about a difficult day in your classroom, can you think of any in the last few months? What happened?* Let the practitioner describe in detail. Then continue by asking: *How did you cope?*

Now turn the conversation to colleagues at their site. *Do you have colleagues at your site? If yes: how many? What does it mean for you to have colleagues close by?* Follow-up questions: *When do you reach out to your colleagues (in what situations, or for what tasks or questions?)*

In your everyday work as a practitioner, what tasks do you have beyond teaching young learners? Follow-up questions: what are you asked to do, e.g. by parents or supervisors, inspectors etc.? *How do you manage? What excites you most about being a practitioner? What do you find most challenging? Anything else you would like to add? Do you have any questions? For your fellow practitioners? Or about the research?*

Rounding off the interview

Pictures of drawings: finish the interview by thanking the practitioners for their contributions. Offer lunch, and help the practitioners get started with their food. Make sure to take pictures of each drawing, and note the participant ID for each, so we have these for later reference. Share with the practitioners that the second visits are coming up next month, that you will be in touch to find a convenient day for them and that this the final visit in the research, and appreciate their time.

Appendix ten | reflective coding scheme

2. Considering own practice: a reflection on own practice and/or her young students' learning or functioning (Bakkenes et al., 2010, p. 539-40).		
Code	**Description**	**Example**
2SO	*Struggling-orientation:* the respondent states a lack or fault in the children (blaming). If the respondent considers circumstances that might explain what happens, including children's background or own teaching performance, see other codes.	no examples found (see **3SO**)
2PO	*Performance-orientation:* the respondent considers own practice and evaluates own teaching performance and/or children's learning/ functioning - asking or answering: - *What do I want to achieve? How well am I doing as a teacher? What should I do?* - *What are children learning? How well are they doing? What should they do/learn?* Respondent considers and evaluates without explicitly trying to make sense of why this is the case (see 2MO).	*At this moment I was thinking that I was feeling happy because I can see that the learners are following the instructions I'm teaching* (D08-B 01:34) *Okay, I felt alright here, it's where you see if the child is not well, or hungry or has a certain issue. You can see them during the check-in time…* (D15-B 00:51) *I wanted to teach them to put the blocks together, as they are in groups. So they can know how to share the blocks amongst themselves* (D08-B 06:20)
2MO	*Meaning-orientation:* the respondent tries to make sense of classroom events by searching for underlying reasons, explicitly considering why an activity worked as it did, children act or learn as they do, or reasons behind own actions and intentions.	I felt happy because here, because I can see that Que knows colours even though he cannot call them by names but he can associate them with things that are similar to the colour (D08-R 11:29)
2D	*Descriptive:* The respondent considers own practice, describing classroom events, what teachers or children do or their role, without stating a lack or fault in the children, evaluating own teaching and/or children's learning/functioning, or searching for underlying reasons.	*Yes, I check which ones are alright, maybe if some are sick, I see them during this time* (D15-B 03:18)
NA	*Not applicable:* a practitioner response, which does not fit any of the above, either by the statement being too short for coding, the content is unrelated or words are missing.	"blank stare" (D15, 00:32); *I feel good, after all I feel good* (D15, 02:58), *In my mind?* (D08-B 07:22)

3. Experiencing friction: noticing a discrepancy between what one expects or wants and what actually happens. Typically, two forms are reported: a) an unexpected or undesired incident, and b) the realisation that a usual teaching approach did not work (Bakkenes et al., 2010, p. 539-40).

Code	Description	Example
3SO	*Struggling-orientation:* the respondent notices the friction, attributing it to a lack or fault in the children (blaming). If the respondent considers circumstances that might explain what happens, including children's background or own teaching performance, see other codes.	*I wanted to bring the children's minds back from the holidays, to bring them back to school content, like Sne (pseudonym), she has forgotten she has to focus on what we are doing, she is busy playing with her feet. As you can see, I'm calling for her attention saying 'Sne'* (D37 B06:12)
3PO	*Performance-orientation:* the respondent notices the friction, and evaluates own teaching performance and/or children's learning/ functioning - asking or answering: - *What do I want to achieve? How well am I doing as a teacher? What should I do?* - *What are children learning? How well are they doing? What should they do/learn?* Respondent considers and evaluates without explicitly trying to make sense of why this is the case (see 2MO).	*I can say that I wasn't feeling great, actually, because I was caught off guard. Because we were not doing anything with the children in the past days. I would give them papers to write on only because most learners are not coming to school. I wanted all of us to start the new lesson in August* (B06 B02:32)
3MO	*Meaning-orientation:* the respondent notices the friction, trying to make sense of classroom events by searching for underlying reasons, explicitly considering why an activity worked as it did, children act or learn as they do, or reasons behind own actions and intentions.	*(...) I was thinking that firstly, they won't know the difference between aquatic frogs and normal frogs. But I saw that some know, because some have houses along rivers. That means they do visit rivers and see these things (...)* (D15 B22:56).
3D	*Descriptive:* The respondent notices the friction, describing classroom events, what teachers or children do or their role, without stating a lack or fault in the children, evaluating own teaching and/or children's learning/functioning, or searching for underlying reasons.	*She went outside to see how's the weather outside today? There is nothing that can stall her. I then here saw that she is taking a long time, that's why I decided to go check on her.* (D15 B05:40)
NA	*Not applicable:* a practitioner response, which does not fit any of the above, either by the statement being too short for coding, the content is unrelated or words are missing.	"blank stare" (D15, 00:32); *I feel good, after all I feel good* (D15, 02:58), *In my mind?* (D08 B07:22)

Appendix eleven | ECCOM social climate scale

Categories in the framework

This coding framework consists of 6 items: *1. Practitioner warmth; 2. Relevance of activities to children's experiences; 3. Support for communication skills; 4. Individualisation of learning activities; 5. Support for interpersonal skills; 6. Student engagement.* Please note: items 3, 4, 5 and 6 have three columns each - A, T and C.

Please note: The original category descriptions are from Stipek & Byler, 2004 (categories 4-8). Original text from their manual is represented with black font, although 'teacher' has been substituted with 'practitioner throughout. Clarifications made as part of the present study are in [blue text]. **Bold** highlights - apart from category titles - have also been done for the present study.

Definitions of ratings for items

Rate each item (and column where applicable) using this 1-5 scale:

5 = these practices predominate (80-100% of the video)

4 = these practices are prominent (60-80% of the video)

3 = these practices are sometimes seen (40-60% of the time)

2 = these practices are not seen very much (20-40% of the time)

1 = these practices are rarely seen (less than 20% of the time)

Ratings are based on the 'spirit' of the dimension (described in bold at the top of the item) as well as specific descriptions and examples. Keep in mind that all the practices in any given column/item will rarely be seen in a single video. Even if only two of the practices described were seen, a video might receive a high score if these practices are very prominent.

Instructions for coding

1. Read through all the ECCOM scales to familiarise yourself with all the items and descriptions.
2. Watch the video in its full length. As you watch, make notes describing what happens - what activit(ies) take place, what does the practitioner and children say or do? Which instances stand out? Make sure to note timings and clear examples.
3. Using your notes, now rate the video on each scale. You can revisit video episodes to verify you ratings on each scale.
4. The scales are meant to reflect an overall impression of the video. Make sure you consider everything you see in the video and average across when giving your score. You must provide justifications for your ratings on the response sheet.
5.When trying to decide between two numbers, only give the higher rating if the practices observed meet the minimum criteria.

1. Practitioner warmth
Practitioner is genuinely warm and responsive toward children.

Practitioner is warm, responsive, understanding, nurturing, genuinely respectful of, and likes children.

Practitioner displays positive affect.
Example: *smiling, patient, enthusiastic, and/or playful.*

Practitioner interacts directly with children.
Example: *crouches/sits at children's level, maintains eye contact.*

Global praise - encouragement and positive comments addressed to the whole class - is captured in this item.

2. Relevance of activities to children's experience
Lessons and activities build on prior knowledge, use real artefacts, and relate to children's experiences in and out of the classroom.

Materials used in the lessons/activities are related to children's own experiences. And this connection is made explicit, e.g. practitioner uses materials to illustrate points, as concrete objects for counting or talking about amounts etc. - and there is an element of child choice and/or drawing on children's own experiences by engaging them in discussion.
Example: *Children make maps of or measure objects in their own room; children study changes in the weather they personally experience; children learn about measurement in the process of making muffins or building model bridges.*

Practitioner **encourages discussion** with children about things that happen outside of school.
Example: *Children discuss current events, personal interests, weekend plans, etc.* Revision does not count as discussion, if children give one-word answers, i.e. practitioner explicitly revises e.g. days of the week, stating 'remember' or refers to a previous lesson, and children give one-word answers.

Lessons/activities are **connected to prior activities/lessons.** This should still be a discussion, and not only revision with one-word responses.
Example: *Practitioner calls attention to a story previously read; children write in science journal about an experiment.*

Evaluations of children's understanding are integrated into activities.
Example: *Writing skills are assessed from journal writing; teacher reads one-on-one with children; children write a book report.*

3-A. Support for communication skills
Practitioner encourages children to engage in conversation and elaborate on their thoughts.

Practitioner engages children individually in conversation.

Practitioner listens, acknowledges, and asks questions - encouraging children to **elaborate on their thoughts**. Note: children should elaborate, it does not count if only the practitioner does it.
Example: *"How did you decide to name your teddy bear Maxwell?"; "How do you know you've colored half of a sandwich?"; "That's right, the answer is 5. How did you solve that problem?"*

Practitioner provides children opportunities to speak in front of a group of peers.
Example: *sharing time; explaining directions; leading activities; explaining how a math problem was solved.*

Practitioner ensures that most children have a turn to speak during the week; practitioner doesn't call repeatedly on the same children; (e.g., may have a system such as going around the circle, alternate boys and girls).

Practitioner encourages children to listen to each other.
Example: *practitioner has children listen to each other and ask questions during sharing time.*

Practitioner creates a learning community - encouraging children to assist each other and to celebrate each other's accomplishments.

Practitioner encourages conversation among children by having then use each other as resources.
Example: *Practitioner has child ask friend to help put up a new sheet of painting paper, explain how to do an activity, suggest what to draw for a story.*

Practitioner encourages dramatic play that involves extensive elaborate communication.

3-T. Support for communication skills
Practitioner does not encourage children to engage in conversation or elaborate on their thoughts **[because s/he is over-involved]**

Practitioner does not engage children individually in conversation.

Practitioner **controls all conversation** and asks predominantly closed-ended questions.

Children are given few opportunities to speak in front of a group of peers except to respond to **direct questions posed by the practitioner or to recite memorised passages / information.**

Practitioner discourages children from using each other as resources.
Example: *Practitioner tells children to do their own work, to think of their own ideas, to ask only the practitioner or another adult for help.*

There is no evidence of dramatic play.

3-C. Support for communication skills
Practitioner does not engage children in interactive conversation and does not facilitate communication among children **[as s/he is absent / under-involved]**

Practitioner is mainly in the background, and does not engage children in conversation or engages in mainly brief, superficial conversation.
Example: *Practitioner is generally unavailable to children (e.g. preparing materials, talking to other adults); practitioner asks children, "how was your weekend?" but does not listen to child's response.*

Children are given some opportunities to speak in front of a group, but practitioner makes little effort to ensure that most children do this.
Example: children call out or practitioner calls on the same children each time; there are few or no activities that allow children to speak in front of the group (e.g., group activities are limited to attendance, lunch count, watching videos, etc.); there is no evidence of systematic turn-taking (e.g., no chart of children's share days).

Children may use each other as resources but practitioner does not explicitly encourage this.
Example: Child may help a friend with a puzzle but practitioner does not acknowledge or encourage this assistance.

Dramatic play materials are available but there is no evidence that the practitioner has encouraged elaborative communication.

4-A. Individualization of learning activities
Practitioner is attentive to children's individual skill level and adapts tasks accordingly.
[Is responsive to children]

'Individualization' means the practitioner addresses one child or group of 2-4. A global comment to whole class is unlikely to be a 4A.
Practitioner makes explicit attempts to find out what children know.
Example: Practitioner asks questions, probes for understanding, and monitors children's work.

Practitioner adjusts the task.
Example: *Breaking task down, simplifying it, making it more difficult.*

Tasks are structured to allow some **individualisation within the same task** [i.e. task is flexible]. Children can demonstrate knowledge in different ways. Children are expected to engage in tasks related to particular skills.
Example: *Some children dictate stories to an adult, others write by themselves.*

The climate of the classroom promotes respect for individual skill levels. [e.g. practitioner reminds children to not laugh at each other's efforts]
Example: *Children's contributions are valued as long as they reflect some genuine effort; improvement and mastery is recognised at whatever level it is achieved.*

Practitioner capitalises on children's own interests in instruction without losing focus of the learning goal.

Practitioner recognises individual strengths of all children.

Practitioner praises children for their efforts and good products.

4-T. Individualization of learning activities [over-involved]
Tasks are not flexible and practitioner does not consider children's individual needs.
[Imposes own norms / goals]

Tasks have little flexibility. All children within a group **do the same tasks** and / or participate in the same activities. Practitioner persists in a lesson or activity even though a large proportion of children do not understand
Example: *Children complete worksheets; practice writing letters, numbers; drills sight words; recite alphabet.*
If practitioner demonstrates a task, 4T applies if s/he asks children to 'do like me' or similar, unless children solve the task in slightly different ways, and s/he does not correct them explicitly.

Children are given almost no free time aside from structured recess and lunch.

Individual students or groups of children are isolated or stigmatised.
Example: *An aide works exclusively with the 'slow' group; special privileges are given for certain 'advanced' children; comments are made about which group is reading the 'easy' or the 'hard' book.*

Practitioner recognises only some children's strengths.
Practitioner **focuses on right / wrong answers**, number correct, correct spelling.

4-C. Individualization of learning activities [under-involved]
Practitioner does not notice or attempt to address children's individual needs.
[S/he is mainly absent, or indifferent]

Children have great discretion in how to complete tasks [the practitioner lets children solve the task however they want, not paying close attention]. Tasks / activities vary greatly and some children do not engage in activities relevant to particular skills. [applies if one quarter of class has shifted their attention away from task].
Example: *Children at a science center mix spices and extracts to make perfume. Practitioner does not follow up to make sure children have learned something. Not all children are required to engage in some activity designed to develop literacy skills.*

Accomplishments or improved skill levels are not emphasised. [If practitioner gives no praise at all or a lot of global praise without noting accomplishments of individual children / small groups, 4C applies]
Example: *Children's accomplishments are not acknowledged by practitioner (e.g. classroom is too chaotic for practitioner to notice what individual children are doing); practitioner does not recognise improvement (e.g., improvement is not a goal, or practitioner gives lots of global praise).*

5-A. Support for interpersonal skills
Practitioner promotes the development of children's interpersonal skills.

Practitioner provides opportunities for **cooperative, small-group activities** that promote peer interactions.

Practitioner monitors children's [social] problem solving efforts and only intervenes when necessary.

Practitioner facilitates children's development of prosocial or interpersonal problem solving skills.
Example: *Meets with individual children who are having problems; reads a book about getting along with friends; leads class discussion on strategies for dealing with conflicts that arise.*

During group work / play, 5A applies if the learners have opportunities to interact and the practitioner is supporting them to collaborate (encourages pair / group work, helps with turn-taking or resolving differences without imposing the practitioner's own solution etc.)

5-T. Support for interpersonal skills
Practitioner solves interpersonal problems and does not provide opportunities for children to develop interpersonal skills. **[over-involved]**

Children spend a lot of time in **seated**, silent individual work or in **adult-directed groups.**

There is **little time for peer interactions** in the classroom; peer interactions take place only on the playground or during recess.

Practitioner is controlling, giving children little opportunity to solve their own problems.
Example: *Practitioner intervenes in children's conflicts and imposes a solution without addressing the social issue or assisting children to develop strategies for solving the problem themselves.*

During play, if the practitioner is telling children what materials or corner to choose, and / or directing their actions (e.g. telling them in what order to cut or draw, what actions to take in pretence play) 5T applies.

5-C. Support for interpersonal skills
Practitioner provides opportunities but does not support development of children's interpersonal skills. **[Because s/he is less present / under-involved]**

Children are allowed to interact freely with peers nearly all the time, without close supervision.
i.e. children are free to interact and the practitioner does not actively support their interpersonal skills such as working together, sharing, take turns, understand each other's perspective.

Practitioner lets **children deal with conflicts** (unless they get seriously out of hand) without attempting to assist them in developing effective strategies.

Clarification: in play fighting or teasing, we will see some smiles / laughter. In conflict, we see frustration anger, crying.

6-A. Student engagement
Practitioner attempts to engage all children in ways that will improve their skills and understanding. **[Activity flow follows children, is engaging to them]**

Practitioner attempts to include or engage children who do not volunteer.

Practitioner conveys to students that they are expected to be engaged in some productive activity most of the time.
Example: *Practitioner asks child wandering around what he would like to do or thinks he should be doing.*

Children usually stay with any given activity for at least 10 minutes.

6-T. Student engagement
Practitioner engages children in rote activities. **[over-involved] Activity flow set by Practitioner; focus on children being busy, on-task (less engaging)**

Some children cannot participate comfortably in whole- or small-group discussions / lessons.
Example: *Their skills or understanding is too poor to answer questions or understand the lesson; practitioner doesn't call on them or when they give a wrong answer, the practitioner asks someone else for the right answer.*

Practitioner engages children in rote memorisation activities.

Practitioner conveys rigid expectations about being engaged in work.
Example: *Yells to child who is briefly distracted or talks quietly to classmate to 'get back to work'.*

Practitioner expects children to be engaged in the same activity for fairly long periods of time - as long as 45 minutes.

6-C. Student engagement
Practitioner makes no systematic effort to engage children in productive activity.
[under-involved] Child engagement is sporadic / less focused

Some children dominate the discussion while others are unengaged.

Student participation may be high, but not necessarily productive.
Example: *Wrong answers or misunderstandings are left hanging without an effort to correct them.*

Practitioner conveys no expectations about students being engaged in productive activity.
Example: *Practitioner does not intervene or attempt to engage in an activity a child who is wandering around.*

Children often (or many children) move from activity to activity, regularly pursuing some activities for less than 5 minutes.

Appendix twelve | guided play coding

Play is guided when the following criteria are met:

Adult is involved in the play scenario - present and *interacting* with the child(ren)

Child(ren) must have chosen the play activity (what to do) - or how to solve it (how to do it)

Adult takes the play beyond what the children have done (e.g. scaffold, model, extend) ***BUT***, the adult cannot begin to direct children's actions. Extensions are not contrived (e.g. randomly suggesting students count the number of blocks they are using to build a structure).

Example of guided play scenario:

A child was measuring his playdough snake, and his educator walked over and helped him read the measuring tape to then be able to measure his snake. Child was marking the length of his snake with his thumb on the measuring tape. His educator showed him that one side of the measuring tape uses inches as the unit of measure. She then asks him, "How long is your snake?" The child replies with, "40 inches". She gives the measuring tape back to him to confirm his measurement. This is guided play because the educator joins what the child was already engaged in, and she *extends* his play by teaching him how to read a measuring tape.

Educator presence but NOT guided play scenario:

A child wants to play with a building block game. He looks through the building cards, and the educator approaches, who sits on the carpet with him. She takes all of the cards and pulls out a select few for the child to choose from to build. The child chooses one card, and she asks, "Which blocks do we need?" Before the child has a chance to respond, she says, "We need four of these" and proceeds to pull the four blocks herself. This is not guided because the educator takes over the child's play, choosing a card for him, as well as pulling out the pieces.

Approach to coding:

1. Watch all play videos and separate all videos that show some instance of guided play, based on the criteria above.
2. Re-watch only guided play videos, now completing emergent descriptive coding for each. Codes outlined in the table below are used to create descriptive codes. These codes are similar to the categories used in the earlier coding framework modelled after Vu et al. (2015). Instead of a binary code for present/not present, the code will be recorded and, if necessary/useful, followed by a very brief description or justification (i.e. describing scene or providing quote). Additional emergent codes not included in the below table will more than likely emerge and should also be recorded.
3. Group similar codes into categories.

4. Discussing emerging categories and codes, we identified one overarching theme, and three sub-themes, which fitted both data sets: *keeping the play going* as the main theme, with *initiating play*, *managing play* and *extending play* as sub-themes.
5. Following this discussion, codes and categories were re-organised into the framework below, and all videos re-coded for instances of each sub-theme.

Sub-theme 1: managing play *The adult supports children to stay on-task and interact with peers during play*	
As children play, the adult circulates and shows interests in what they do; reminds them how to use materials and stay on-task, resolves disagreements and peer conflict, supports children to collaborate with peers and to continue playing (e.g., providing materials, permitting children to change play corner, or helping them to join peer group). *Please note: in this theme, the adult does **not** enter or extend children's play.*	
Codes	**Description**
Proximity to child play	This code refers to in what way the adult is physically in the environment of the play scenario. Consider whether the adult is: - Adjacent to play (e.g. sitting on a chair next to play) - At child level (i.e. sitting on the floor with students, at eye level)
Supporting play (managing)	Refers to the adult helping children to choose what and where to play, and to join peer groups. This might be done through: - asking about child interest and listing play activity options, - making suggestions and providing play materials, granting permission to child request or suggestion - helping child to join a peer group
On-task (managing)	On-task makes note of instances when the adult provides reminders of, for example, purpose of a task, how to play with a material, or the next step of a game/puzzle, etc. or where the adult briefly checks-in, asking what children are doing.
Model (managing)	Adult briefly takes over the task/play, showing students how to use materials by doing it for them with little or no explanations; - Mainly implicit (e.g. the adult picks up a child's bricks and clicks them together before handing them back)
Intervening without rationale (managing)	Refers to the adult soothing when a child is upset through caring gestures, resolving a peer conflict for children, reminding children of class rules or social norms as a verbal message or a nonverbal gesture, for example, nudging child who is driving a toy car on a picture on the floor), however, adult does not offer a rationale. If done with a rationale, see Extend below.
Traditional praise and acknowledging (managing)	- Traditional praise (e.g. "Good job!" or "You guys are brilliant!") - Validation of suggestions and experiences (e.g. "That's an interesting one, we haven't done that one before!" or "you have a lot of knowledge about hotels") - Brief acknowledgement (a nod, smile, gesture or exclamation, e.g. when child holds up a piece of work, or by repeating child's answer)

Sub-theme 2: initiating play *The adult provides space and materials for play, supporting and framing children's play*	
The adult helps children to get started playing through suggestions, guiding children to choose, providing materials and giving permission. The adult might also frame what and how to play, including degree of child choice and structure, time and space provided. *Please note: in this theme, the adult does **not** enter or extend children's play.*	
Code	**Description**
Supporting play (initiating)	Refers to adult helping children to choose where and what to play by asking about child interest, listing play activity options, making suggestions, or helping child to join a group; providing play materials (also by child request), granting permission.
On-task (initiating)	On-task makes note of instances when the adult provides reminders of, for example, purpose of a task, how to play with a material, or the next step of a game/puzzle, etc. or where the adult briefly checks-in, commenting on a child not playing.
Intervening (initiating)	Reminding children of class rules or social norms as a verbal message, or a nonverbal gesture.

Sub-theme 3: entering and extending play (guided play) *The adult enters children's play and deepens their learning within the play context*	
This code refers to the adult tactfully entering children's play (i.e. attuned to and respecting children's interest, using a warm, encouraging tone) and taking the play beyond what the children have done (e.g. scaffold, model, extend). **BUT** the adult cannot begin to direct children's actions, and extensions are not contrived (e.g. randomly suggesting children to count the number of blocks they have used to build a tower). Also, child(ren) must have chosen what and/or how to do a play activity.	
Proximity to child play	The adult is involved in the play scenario - present and *interacting* with the child(ren), either at child level (i.e. sitting on the floor with students, at eye level) or participating in same activity (e.g. cutting shapes out of playdough at a centre in the same way as children).

Extend	This code refers to the adult taking a starting point in child(ren)'s interests, thoughts, comments, actions in a play scenario to build upon or deepen their learning. This might be done through:
	- The use of open-ended questions, modelling, scaffolding, praising with a process focus, or intervening in peer conflict or gently discipling misbehaviour with a rationale (see these codes below)
	- Providing additional materials
	  - E.g. adult notices student placing wooden pieces on one side of scale during a free play period. S/he then makes a suggestion for putting a wooden piece on the other side of the scale to compare the weights
	- Sharing observations about the play with children to get them thinking about where else they can take it
	  - E.g. adult compares student height to that of a tower of cups they built; "Your shoulder is until there"; "Your head is until there"

Open-ended questions (extending)	Referring to the use of questions that warrant more than a yes/no or one-word response - Requires children to elaborate/explain their interests, thoughts, comments, actions in play scenario. - May prompt children to help them connect ideas or remember, e.g. “who normally use planes, and where do they go?” (If the adult elaborates, then this is not a an open-ended question)
Model (extending)	Adult actively partakes in task/play and shows children how to use materials or do the task /play while holding their attention; - Can be either explicit or implicit (i.e. sometimes the adult will directly tell children that they can show them, and other times the educator will simply participate in the activity with children)
Scaffold (extending)	This code refers to how the adult supports child learning in play contexts through some form of structuring. This might look like: - Adult mentioning why they have a specific centre/activity in the classroom (i.e. relating back to an earlier learned concept or theme currently under exploration) - Supporting a child reading labels in a centre by suggesting they first determine the initial letter sound - If a student is struggling, sharing tips on how to complete a task with greater ease (e.g. what to look for in puzzle pieces) - Explicitly suggesting or prompting further ideas for the play, for example, to make bread in a shop selling tea; If adult physically adjusts how children sit together or solves a tricky task / puzzle for them, this is not scaffolding; child must remain actively involved in completing the task or activity
Process praise (extending)	- Process praise – focus of praise is on effort, strategies, choices (e.g. “I like how you…”)
Intervening with rationale (extending)	Soothing when a child is upset by labelling emotional states; resolving a peer conflict with children; disciplines gently by explaining why a behaviour is not accepted (offers rationale

Appendix thirteen | overview of practitioner involvement during play

Visit 1				
Name	*Play facilitation**	*Managing play*	*Initiating play*	*Extending play*
Maude	57% of the time	0 (0%)	0 (0%)	2 instances / 3m 48s (57%)
Fikile	40% of the time	2m 33s (28%)	0 (0%)	2 instances / 1m 7s (12%)
Lisa	85% of the time	8m 14s (54%)	1 instance / 30s (3%)	7 instances / 4m 8s 27%
Thembi	99% of the time	11m 21 (77%)	1 instance / 1m 30s (10%)	7 instances / 1m 45s (12%)
Martha	54% of the time	8m 10sec (54%)	0 (0%)	0 (0%)
Total	**42:26**	**30:18**	**2 instances / 2:00**	**18 instances / 10:08**
Visit 2				
Name	*Play facilitation**	*Managing play*	*Initiating play*	*Extending play*
Anele	55% of the time	7m 50sec (52%)	1 instance / 30s (3%)	0 (0%)
Lisa	97% of the time	6m 58s (73%)	2 instances / 55s (6%)	7 instances / 2m 47s (18%)
Lihle	28% of the time	1m 12s (8%)	1 instance / 20s (2%)	2 instances / 2m 45s (18%)
Liyanda	60% of the time	3m 30s (23%)	1 instance / 20s (2%)	3 instances / 5m 10s (34%)
Thembi	97% of the time	13m 20 (88%)	0 (0%)	7 instances / 1m 15s (8%)
Martha	63% of the time	5m 50s (39%)	1 instance / 2m 7s (14%)	1 instance / 1m 30s (10%)
Total	**53:39**	**37:20**	**6 instances / 3:32**	**20 instances / 12:47**
Revisit				
Name	*Play facilitation**	*Managing play*	*Initiating play*	*Extending play*
Maude	93% of the time	5m 21s (35%)	1 instance / 50s (6%)	7 instances / 7m 55s (52%)
Lisa	90% of the time	5m 6s (34%)	1 instance / 2m 50s (19%)	4 instances / 5m 35s (37%)
Lihle	44% of the time	5m 30s (40%)	0 (0%)	3 instances / 34s (4%)
Total	**32:21**	**15:57**	**2 instances / 3:40**	**14 instances / 13:24**
Full total	**2:08:26 (66%)**	**1:23:35**	**9:12**	**40:19**

**Combined duration for all three educator role themes: managing play, initiating and extending play.*

Appendix fourteen | overview of TREE's pilot support programme

Programme background and objectives

Training and Resources in Early Education (TREE) provides accredited qualifications for early childhood professionals working with children aged 0-6 in both formal and informal learning settings. Their stated mission is to help break the cycle of poverty by improving access and quality of early learning provision, and recognising the need for interventions that may reverse some of the poverty-related effects experienced by young children. Each year, the organisation trains more than 2000 early childhood practitioners in the National Qualifications Framework Level 4 qualification (corresponding to a vocational certificate), as well as continued professional development (TREE proposal November 2015, unpublished).

TREE strives to support practitioners to implement what they term quality, holistic and developmental early childhood programmes in both formal education and informal learning contexts. Focusing on practitioners who recently completed their certification to become qualified reception grade practitioners, the stated programme objectives for 2016 were:

- Improved practitioner knowledge, skills, and proficiency in modelling practical, active learning through play.
- Improved understanding, ability, and practitioner confidence in initiating and elevating quality engaging age appropriate learning opportunities for children.
- Increased organizational capacity and sustainability of mentoring and support programmes for practitioners and other entry level workforce in TREE facilitated programmes.
- Key government stakeholders and ECD stakeholders better understand, recognise, and actively promote learning through play.

Overview of programme components

In 2016, the pilot programme consisted of three main components:

Kick-off training: All practitioners attended an initial two-day training in April, which was conducted by a TREE trainer, who would also act as their mentor in smaller groups called *clusters*. The two-day training placed emphasis on participants experiencing playful activities themselves and reflecting on the learning potential. The play activities featured homemade toys, and a concept called Six Bricks[4]. This concept consists of six LEGO Duplo bricks of different colours, and a range of playful games and activities designed to promote children's focus, memory, collaboration, language and problem-solving skills.

Clusters and workshops: The clusters formed communities of practice for practitioners working within the same area. Each consisted of 12 practitioners and one TREE mentor. Practitioners stayed in contact with their cluster via the social media platform *WhatsApp*, and met in person during four one-day workshops between May and November 2016. The workshops featured playful activities, reflection sessions and addressed topics relevant to translating theoretical knowledge of children's development, learning and play into practice: hands-on classroom activities, appropriate discipline and praise techniques, child-centred learning and methods of reducing teacher-directed learning, and teaching around a theme.

Site support visits: In addition to trainings and workshops, mentors visited each practitioner in their cluster twice during the year to observe and support their in-class practice.

Together, these components were intended to foster sharing among practitioners and encourage problem-solving of practical issues they faced in their work. Upon completion of the pilot programme, practitioners were awarded a certificate of completion.

[4] For further details on the Six Bricks Concept, visit: https://www.legofoundation.com/en/learn-how/knowledge-base/six-bricks/